

CONTENTS

Transformer, Lamp holder, S-9 LED & Neon bulb, Contact block	2
Pilot light 22 ϕ , 25 ϕ , 30 ϕ , LED, Neon, Transformer type	3
22 ϕ Push button switches, Emergency push button switches	4
22 ϕ Illuminated push button switches	5
22 ϕ Selector switches, Illuminated selector switches	6-7
25 ϕ Push button switches	8
25 ϕ Illuminated & Emergency push button switches	9
25 ϕ Selector switches, Illuminated selector switches	10
30 ϕ Push button switches, Illuminated & Emergency stop switches	11
30 ϕ Selector & Illuminated emergency push buttons	12
30 ϕ Illuminated selector switches, Key selector switches, Rain proof boot	13
Control station, Control box	14
22 ϕ Legend plate	15
25,30 ϕ Transformer type pilot light, Flush type pilot light	16
22 ϕ , 25 ϕ , 30 ϕ LED type, Neon type pilot light	17
8 ϕ , 10 ϕ , 12 ϕ , 16 ϕ LED type, neon type pilot light	18
25 ϕ , 30 ϕ Push button switches, Emergency stop push buttons	19-21
22 ϕ , 25 ϕ , 30 ϕ Push buttons, Emergency push buttons "PBK" type	21-22
25 ϕ , 30 ϕ Illuminated push button switches	23
25 ϕ , 30 ϕ Selector switches, Key selector switches	24-25
Monolever switch	25
Snap switches 2 poles, 3 poles, 4 poles, 6 poles, 9 poles, 12 poles	26
Power push buttons 10A, 15A, 30A	27
Control push buttons 5A 250VAC	27
Foot switches	28
Buzzer, Siren, Electric bell	29
Relay sockets	30
Fuse box & Fuse	31
Cassette assembly terminal blocks 10A ~ 60A	32
Rail mount terminal blocks 10A-240A, Double deck terminal 10A, 20A	33-34
Screw clamp terminal blocks 2.5mm ² ~ 70mm ² , Cable marker	35-37
Disconnect terminal, Feed-through terminal	38
Fixed type terminal blocks, 15A, 25A, 3 poles, 4 poles, 6 poles, 12 poles	39-40
Joint type terminal blocks 20A, 30A, 60A, 100A, 150A, 200A, 300A, 400A	40-42
Double row terminal strips, PCB mounting terminal blocks	43-44
Bus bar insulator SM25, SM30, SM35, SM51, SM76	44
Warning light 100 ϕ , 130 ϕ , 180 ϕ , Hour meter	45-46
Timer	47-50
Panel meter(A, V, Hz, Cos θ , kW meter) 60, 72, 80, 96, 100, 110mm	51-55
Current transformer	56-57
Temperature controller, Thermal coupler	58-59
Electro-magnetic counter & Machine counter	60
Tower light	61-64

22, 25, 30 mm ϕ series control units**CSA Certified 186663(LR108205-3)****Applicable Requirements**

CAN/CSA-C22.2 NO55-M1986 – Special use switches
UL1054 – Special use switches

**Products**

CLASS 6241 10 SWITCHES – snap – special use

CLASS 6241 90 SWITCHES – snap – special use – Certified to US standard

Rated 125VAC 6A, 300V AC 3A series designation 22, 25 and 30 mounting diameter. Maybe provided with AT-01 transformer and 6.3V light assembly.

Certificate No. LR 108205-2**CLASS:** 5421 01 Transformers-class2

Products: Transformer, Model AT-01, Input rated 230-240VAC, 50/60Hz, Output 6V AC, 1W, class A insulation

Applicable Requirements

CAN/CSA-C22.2 No 66 – 1988 – Specialty Transformers

NOTE: Transformer units of 110, 220, 240, or 440 50/60Hz rating can be used on a primary voltage of 100V, 200V or 400V respectively.

Screw clamp rail type terminal block**Certificate No. LR 108205-1****Class**

620801 - WIRE CONNECTING DEVICES – Terminal Assemblies

Products

Terminal block, sectional, rail mount, for use with insulated, solid or stranded copper conductors



Cat No.	Amp (Max)	Volts	Wire Range AWG	Assigned Torque (N.m)
ATB-4	32 A	600	22-10	0.79
ATB-6	40 A	600	22-8	0.79
ATB-10	60 A	600	18-6	4.0 – 2.3
ATB-16	75 A	600	16-6	5.1 – 4.0
ATB-35	115 A	600	12-2	13.0

Applicable Requirements

CAN/CSA – C22.2 No 158 – 1987 – Terminal Blocks – Industrial products

TUV certificate No. R 50085066

Tested acc. To

EN 60947-1:2004**EN 60947-7-1:2002**

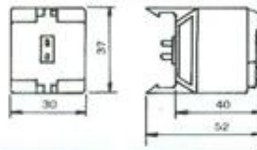
Rail type terminal block



Cat No.	Rated connecting capacity	Voltage
ATB – 2.5	0.5 – 2.5 mm ²	20A
ATB – 4	0.5 – 4 mm ²	30A
ATB – 6	0.5 – 6 mm ²	40A
ATB – 10	0.5 – 10 mm ²	60A
ATB – 16	0.5 – 16 mm ²	75A
ATB – 25	0.5 – 25 mm ²	110A
ATB – 35	0.5 – 35 mm ²	115A

Ambient Temperature: -40°C up to 85°C

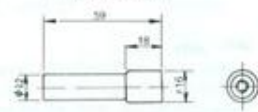
Transformer



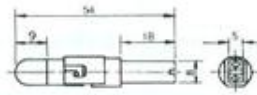
E-10 BULB
S-9 BULB

6V, 12V, 24V, 30V, 36V, 48V,
NEON : 110V 220V 380V
440V.

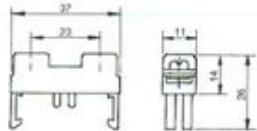
Lamp holder tool



Lamp Holder



Direct adaptor



S-9 Led lamp

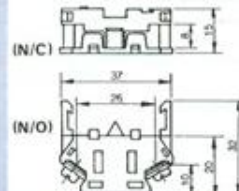


Rated Voltage
6V, 12V, 24V
110V / 120V
220V / 240V
colour : Red, Green, Orange
Yellow, Blue, White

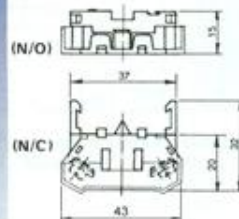
Contact block

A (N/O)

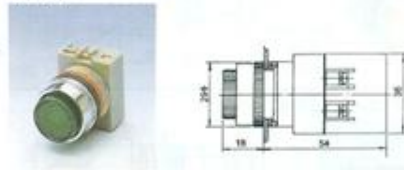
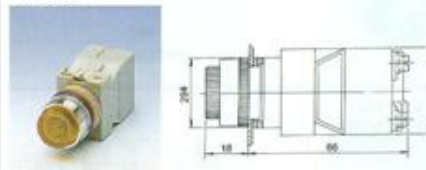
B N/C



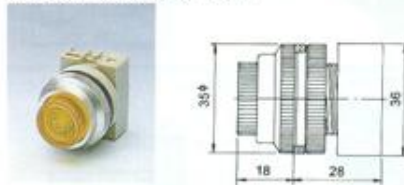
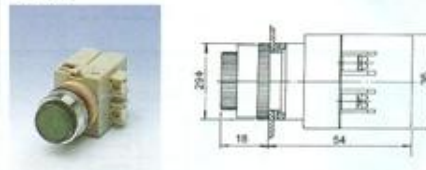
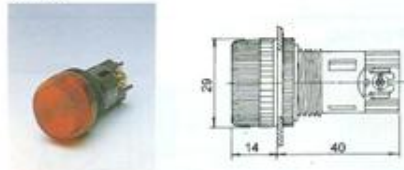
Contact Block finger protect



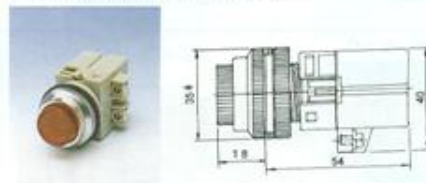
ANPL	—	22	2	R
Type	Mounting hole	Voltage rating		lens color
ANPL: Direct type	22: 22φ 25: 25φ 30: 30φ	1	110V	R: Red G: Green Y: Yellow B: Blue W: White
ATPL: Transformer type		2	220V	
		3	380V	
		4	440V	
		5	6V	
		6	12V	
		7	24V	
		Direct type only		

SPECIFICATIONANPL-22 NEON PILOT LIGHT
ANPL-25ATPL-22 TRANSFORMER PILOT LIGHT
ATPL-25

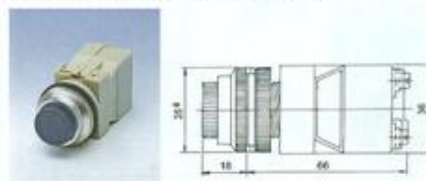
ANPL-30 NEON PILOT LIGHT

TPL-22 TRANSFORMER PILOT LIGHT
TPL-25NPL-22 NEON PILOT LIGHT
NPL-25

TPL-30 TRANSFORMER PILOT LIGHT

SNPL-22 NEON PILOT LIGHT
SNPL-25

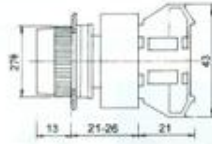
ATPL-30 TRANSFORMER PILOT LIGHT



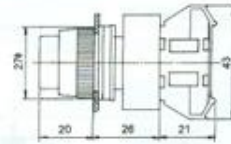
APB	22	1	O	R
Type	Mounting hole	No. of contact	Type of contact	Head color
APB: Standard head	22: 22mmφ	1-4	O: NO (a) (1/O)	R: Red
AEPBS: Small mushroom head	25: 25mmφ		C: NC (b) (1/C)	G: Green
AEPB: Mushroom head	30: 30mmφ		O/C: NO+NC (1/O/C)	Y: Yellow
ALEPB: Push Lock			(1a+1b)	BK: Black BL: Blue

SPECIFICATION

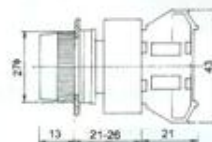
APB 22-1/O



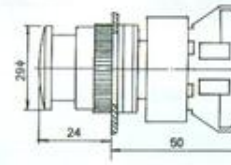
APBL 22-1O/C



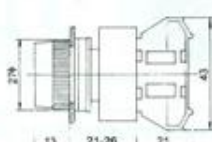
APB 22-1/C



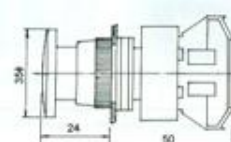
AEPBS 22-1/O, AEPBS22-1/C



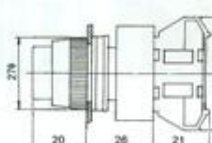
APB 22-1O/C



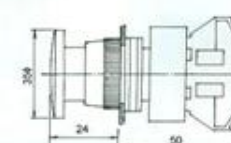
AEPB 22-1/C



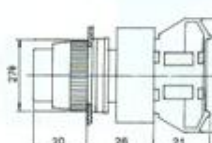
APBL 22-1/O



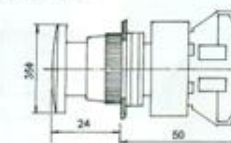
AEPB 22-1O/C



APBL 22-1/C



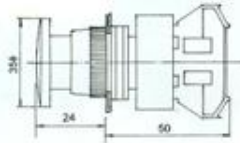
ALEPB 22-1/C Emergency stop



ILLUMINATED PUSH BUTTON SWITCHES



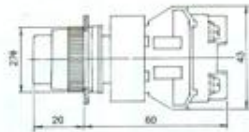
ALEPB 22-10/C



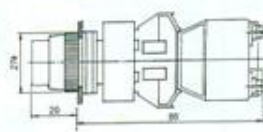
Type	Mounting hole	Voltage	No. of Contact	Type of contact	Lens color
ANLPB: Direct type	22: 22mmφ	1 110V	1-4	O: N/O (a)	R: Red
ATLPB: Transformer type	25: 25mmφ	2 220V		C: N/C (b)	G: Green
NI-EPB: Direct type	30: 30mmφ	3 380V		O/C: N/O+N/C	Y: Yellow
TI-EPB: Transformer type		4 440V		(a + b)	B: Blue
NI-LEPB: Direct type		5 12V			W: White
TI-LEPB: Transformer type		6 24V			
		7 30V			

SPECIFICATION ILLUMINATED PUSH BUTTON SWITCHES

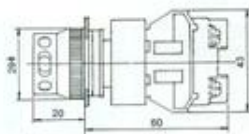
NLPB 22-10/C



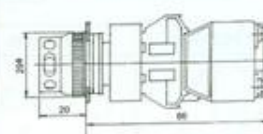
TLPB 22-10/C



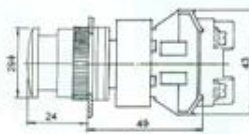
NFLPB 22-10/C



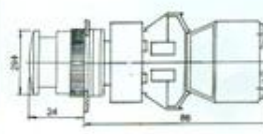
TFLPB 22-10/C



ANLPB 22-10/C



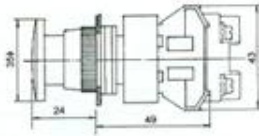
ATLPB 22-10/C



ILLUMINATED PUSH BUTTON SWITCH

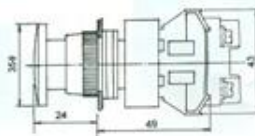


NIEPB 22-1O/C

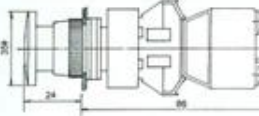


NILEPB 22-1O/C

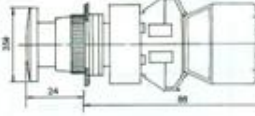
Emergency stop



TIEPB 22-1O/C



TILEPB 22-1O/C



SELECTOR SWITCHES

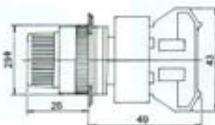
SELECTOR SW. → ASS — 22 2 1 O/C R

Type	Mounting hole	Voltage	Position	No. of contact	Type of contact	lens color
ASS : Knob type	22: 22mm	1: 110V	2: position	1-4	O: N/O (a)	R: Red
ALSS : Lever operator	25: 25mm	2: 220V	3: position		C: N/C (b)	G: Green
AKSS : Key selector	30: 30mm	3: 380V			O/C: N/O+N/C	Y: Yellow
NISS: Direct Inuminant		4: 440V			(a + b)	W: White
TISS: Transformer type		5: 12V				
NISS:		6: 24V				
TISS:		7: 30V				

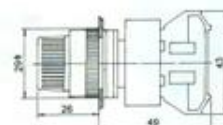
ILLUMINATED SELECTOR SWITCH → NISS — 22 2 3 1 O/C R

2 POSITION	2 POSITION	3 POSITION	2 POSITION SPRING RETURN	3 POSITION SPRING RETURN

ASS 22-1/O, 0-1



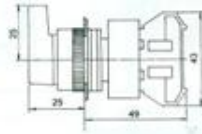
ASS 22-1O/C, 1-2
ASS 22-2/O, 1-0-2



SELECTOR SWITCH, ILLUMINATED SELECTOR



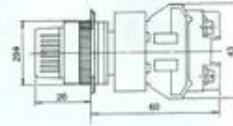
ALSS 22-1/O, 0-1



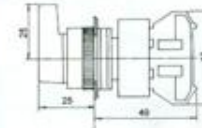
NISS 22-1O/C, 1-2
NISS 22-2/O, 1-0-2



ILLUMINATED



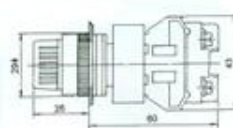
ALSS 22-1O/C, 1-2
ALSS 22-2/O, 1-0-2



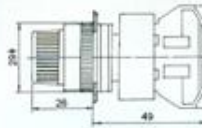
NUSS 22-1O/C, 1-2 SPRING RETURN
NUSS 22-2/O, 1-0-2 SPRING RETURN



ILLUMINATED



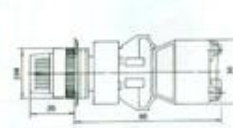
AUSS 22-1O/C, 1-2 SPRING RETURN
AUSS 22-2/O, 1-0-2 SPRING RETURN



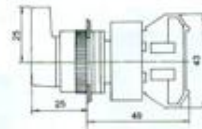
TISS 22-1O/C, 1-2
TISS 22-2/O, 1-0-2



ILLUMINATED



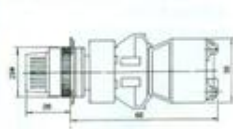
LUSS 22-1O/C, 1-2 SPRING RETURN
LUSS 22-2/O, 1-0-2 SPRING RETURN



TUSS 22-1O/C, 1-2 SPRING RETURN
TUSS 22-2/O, 1-0-2 SPRING RETURN



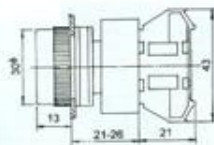
ILLUMINATED



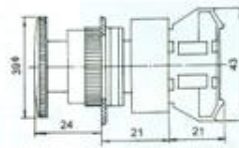
PUSH BUTTON SWITCHES 25 ϕ



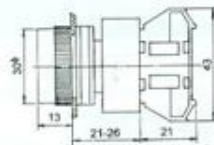
APB 25-1/O



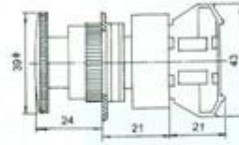
ALEPB 25-1/C



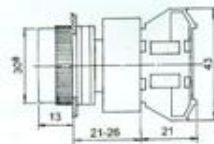
APB 25-1/C



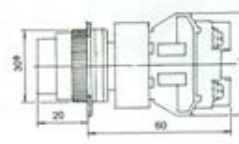
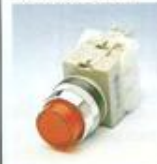
ALEPB 25-1O/C



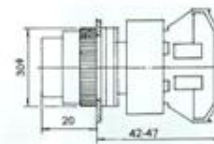
APB 25-1O/C



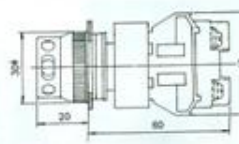
ILLUMINATED PUSH BUTTON
NLPB 25-1O/C



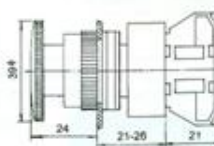
APBL 25-1O/C



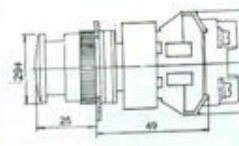
FLPB 25-1O/C ILLUMINATED



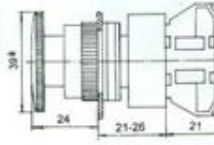
AEPB 25-1/C



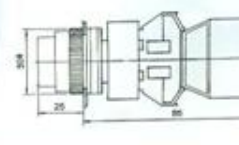
ANLPB 25-1O/C ILLUMINATED



AEPB 25-1O/C

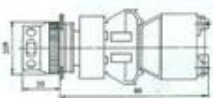
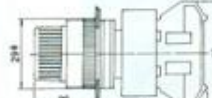
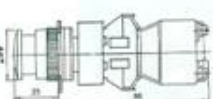
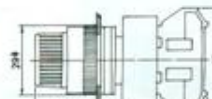
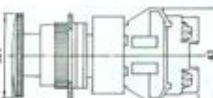
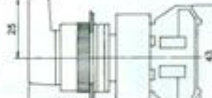


TLPB 25-1O/C ILLUMINATED



**ILLUMINATED PUSH BUTTON,
SELECTOR SWITCHES 25 ϕ**



TFLPB 25-10/C 	ILLUMINATED 	ASS 25-1/O, 0-1  
ATLPB 25-10/C 	ILLUMINATED 	ASS 25-10/C, 1-2 ASS 25-2/O, 1-0-2  
NIEPB 25-10/C 	ILLUMINATED 	ALSS 25-1/O, 0-1  
TIEPB 25-10/C 	ILLUMINATED 	ALSS 25-10/C, 1-2 ALSS 252/O, 1-0-2  
TILEPB 25-10/C 	ILLUMINATED 	AUSS 25-10/C, 1-2 SPRING RETURN AUSS 25-2/O, 1-0-2 SPRING RETURN  

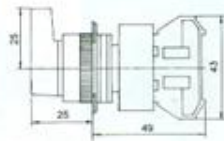
**SELECTOR SWITCHES,
ILLUMINATED SELECTOR 25mm ϕ**



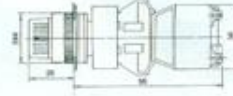
AUSPICIOUS

LUSS 25-10/C, 1-2
LUSS 25-2/O, 1-0-2

SPRING RETURN
SPRING RETURN

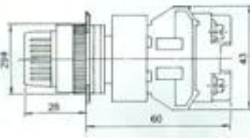


TISS 25-10/C, 1-2
TISS 25-2/O, 1-0-2

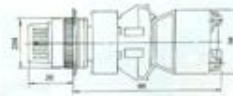


NISS 25-10/C, 1-2
NISS 25-2/O, 1-0-2

ILLUMINATED

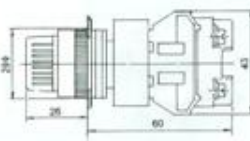


TUSS 25-10/C, 1-2 SPRING RETURN
TUSS 25-2/O, 1-0-2 SPRING RETURN

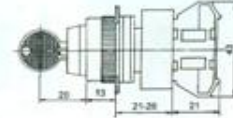


NUSS 25-10/C, 1-2 SPRING RETURN
NUSS 25-2/O, 1-0-2 SPRING RETURN

ILLUMINATED

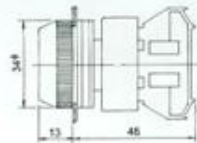


KEY SELECTOR SWITCH 25mm ϕ
AKSS 25-1/O(N/O)
AKSS 25-1/C(N/C)
AKSS 25-10/C, 2Position
AKSS 25-2/O, 3Position

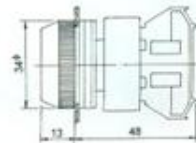


30mm ϕ CONTROL UNIT PUSH BUTTON

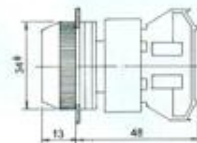
APB 30-1/O



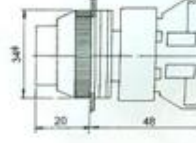
APB 30-10/C



APB 30-1/C



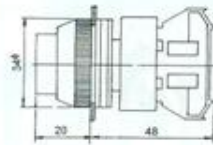
APBL 30-1/O



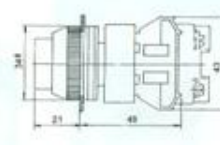
30 mm ϕ PUSH BUTTON
ILLUMINATED PUSH BUTTON



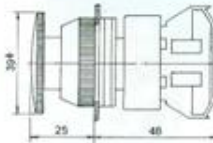
APBL 30-10/C



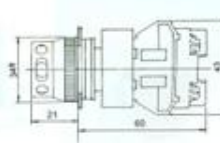
NLPB 30-10/C



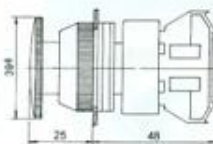
AEPB 30-1/C



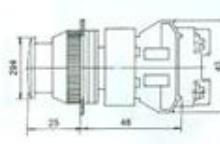
FLPB 30-10/C



AEPB 30-10/C

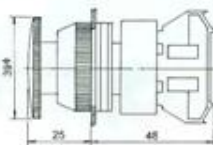


ANLPB 30-10/C

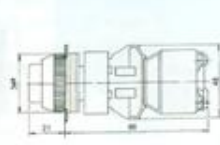


ALEPB 30-1/C

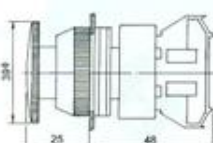
Emergency stop



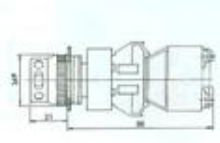
TLPB 30-10/C



ALEPB 30-10/C



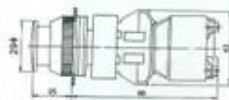
TFLPB 30-10/C



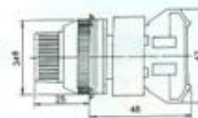
30mm ϕ ILLUMINATED,
EMERGENCY PUSH BUTTON, SELECTOR



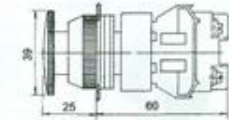
ATLPB 30-1O/C



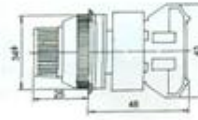
ASS 30-1/O, 0-1



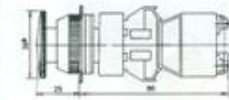
NIEPB 30-1O/C



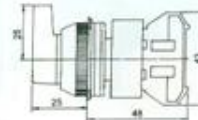
ASS 30-1O/C, 1-2
ASS 30-2/O, 1-0-2



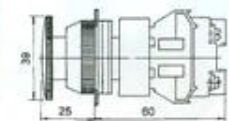
TIEPB 30-1O/C



ALSS 30-1/O, 0-1



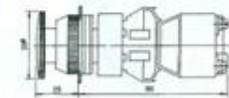
NILEPB 30-1O/C



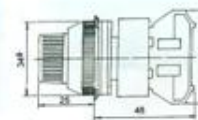
ALSS 30-1O/C, 1-2
ALSS 30-2/O, 1-0-2



TILEPB 30-1O/C



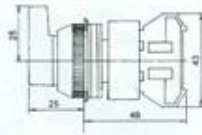
AUSS 30-1O/C, 1-2 SPRING RETURN
AUSS 30-2/O, 1-0-2 SPRING RETURN



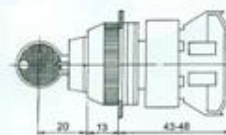
**30mm ϕ SELECTOR SWITCHES,
ILLUMINATED SELECTOR**



LUSS 30-1O/C,1-2 SPRING RETURN
LUSS 30-2/O,1-0-2 SPRING RETURN

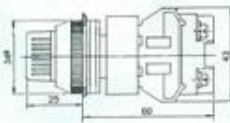


KEY SELECTOR SWITCH AKSS 30-1/O(N/O),
30mm ϕ AKSS 30-1/C(N/C),
AKSS 30-1O/C (N/O+N/C), 2Position
AKSS 30-2/O (2N/O), 3Position

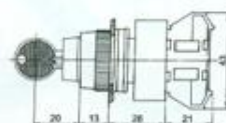


NISS 30-1O/C,1-2
NISS 30-2/O,1-0-2

ILLUMINATED

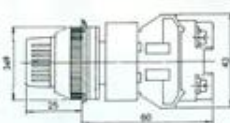


KEY SELECTOR SWITCH AKSS 22-1/O(N/O),
22mm ϕ AKSS 22-1/C(N/C),
AKSS 22-1O/C (N/O+N/C), 2Position
AKSS 22-2/O (2N/O), 3Position

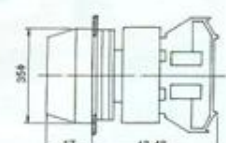


NUSS 30-1O/C,1-2 SPRING RETURN
NUSS 30-2/O,1-0-2 SPRING RETURN

ILLUMINATED

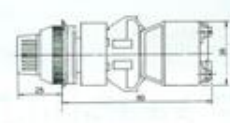


RAIN PROOF PUSH BUTTON RPB 30-1/O
30mm ϕ RPB 30-1/C
RPB 30-1O/C

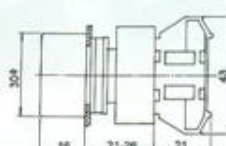


TISS 30-1O/C,1-2
TISS 30-2/O,1-0-2

ILLUMINATED

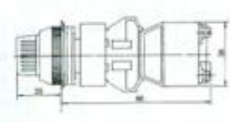


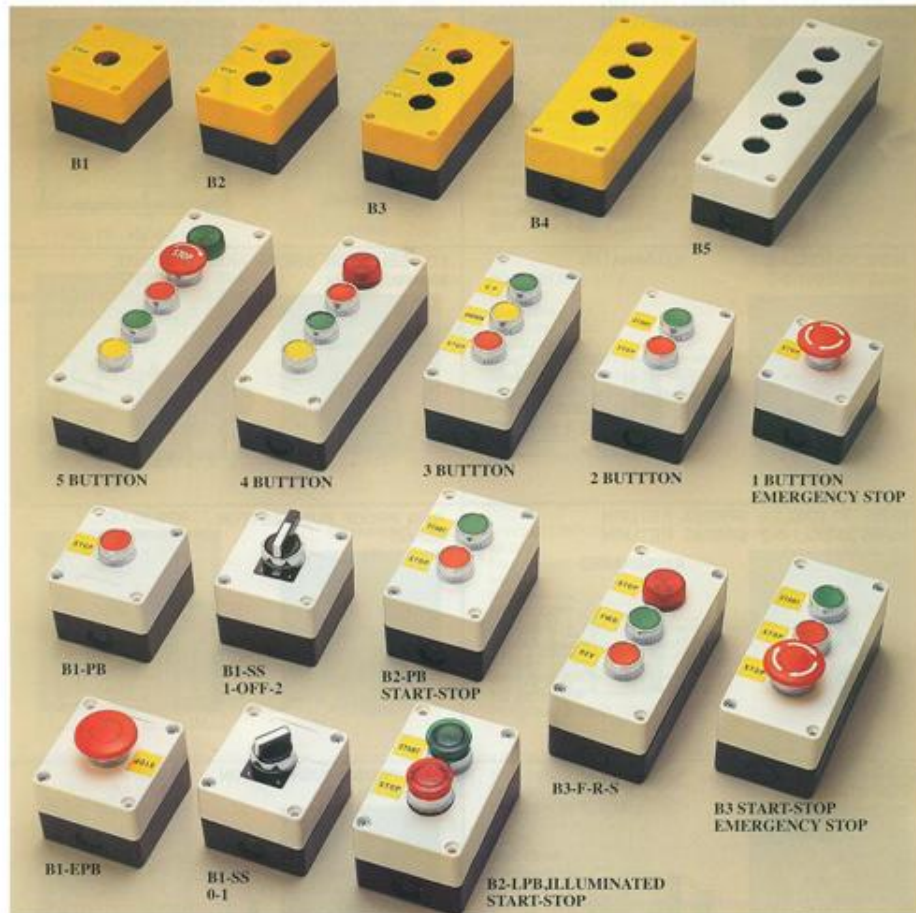
RAIN PROOF PUSH BUTTON RPB 22-1/O
22mm ϕ RPB 22-1/C
RPB 22-1O/C



TUSS 30-1O/C,1-2
TUSS 30-2/O,1-0-2

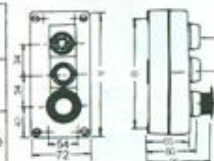
SPRING RETURN
SPRING RETURN
ILLUMINATED





1 pushbutton "START"		AP/ST-1
1 pushbutton "STOP"		AP/ST-2
1 mushroom head pushbutton		AP/ST-3
1 Latching mushroom head pushbutton "STOP"		AP/ST-4
1 illuminated pushbutton with neon lamp "STOP"		AP/ST-5
2 pushbutton "START" "STOP"		AP/ST-6
2 illuminated pushbutton with neon lamp "START" "STOP"		AP/ST-7

3 pushbuttons "FORWARD" "REVERSE" "STOP"		AP/ST-8
3 pushbuttons "UP" "DOWN" "STOP"		AP/ST-9
1 red pilot light with neon lamp		AP/ST-10
2 Pushbuttons "START" "STOP"		AP/ST-11



	A	B
1 button	78	67
2 button	111	89
3 button	151	130
4 button	185	150
5 button	222	184

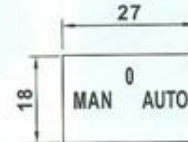
LEGEND PLATE



LEGEND PLATE FRAME



LEGEND PLATE SIZE



LEGEND PLATES

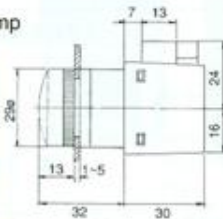
UP 01	START 02	STOP 03	OPEN 04	CLOSE 05	ON 06	OFF 07	FWD 08	REV 09	HIGH 10	LOW 11
OFF ON 21	0 1 22	I II 23	STOP START 24	HIGH LOW 25	MAN AUTO 26	UP DOWN 27				
OFF ON 301	OFF ON 302	OFF HIGH 303	OFF FOR 304	0 1 2 305	UP OFF 306	0 I II 307				

PLR		25		2		G	
Lens type	Mounting	Voltage rating		Lens color		Bulb type	
PLR: Round	22 ϕ	1	110V	With Transformer	R: Red G: Green Y: Yellow B: Blue W: White	25 ϕ	
PLS: Square	25 ϕ	2	220V			E-10	6.3V 1W
PLF: Flat	30 ϕ	3	380V			E-10	24V 1W
PLB: Big		4	440V			E-10	30V 1W
FPL: Flush type		5	6V	Without Transformer		30 ϕ	
		6	18V			E-12	18V 2W
		7	24V				24V 2W
		8	30V				30V 2W

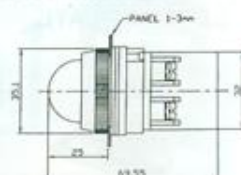
DIMENSIONS

PLT-22

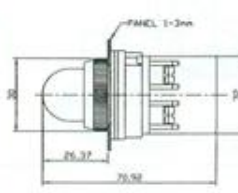
Transformer pilot lamp



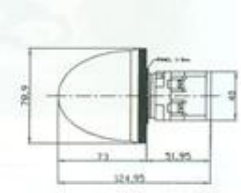
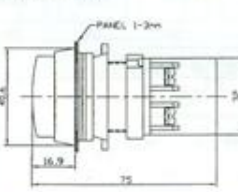
PLR-30 Round lens, PLF-30 Flat round lens



PLR-25



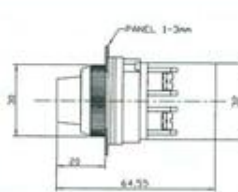
PLB-30

PLS-25 25mm ϕ , PLS-30 30mm ϕ 

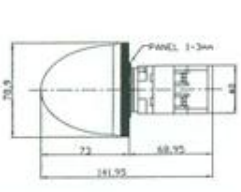
FPL-30



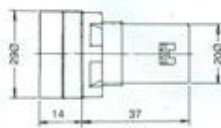
PLF-25



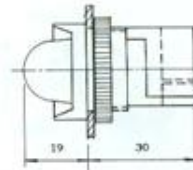
FPLB-30



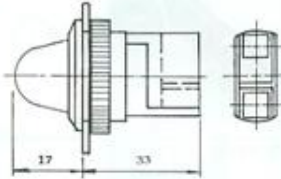
PILOT LAMP
L-22 22ø LED lamp



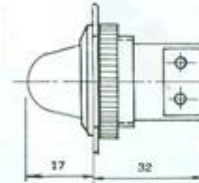
NPLRR-25A



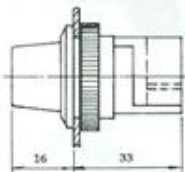
NPLR-25A



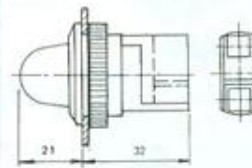
SNPLR-25



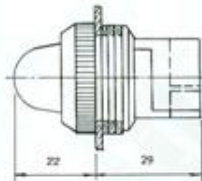
NPLF-25A



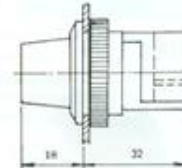
NPLR-30A



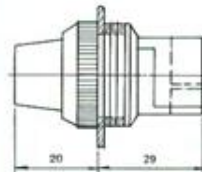
NPLR-25B



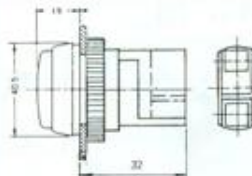
NPLF-30A



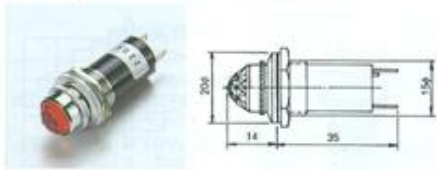
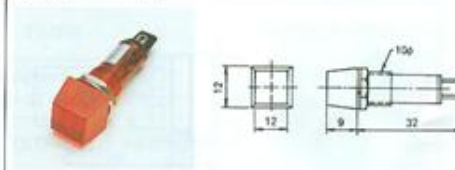
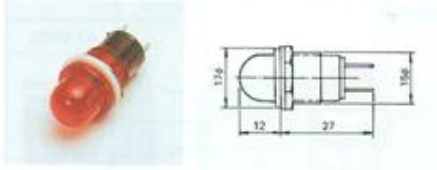
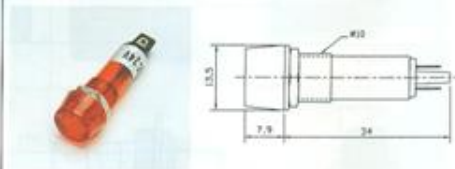
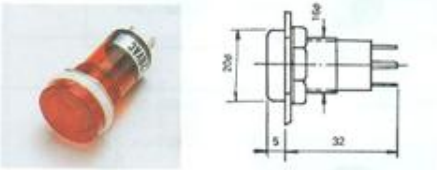
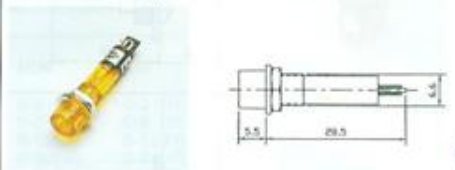
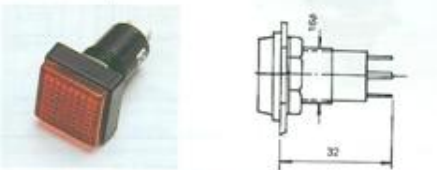
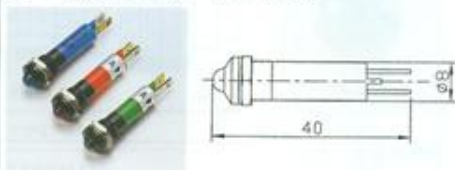
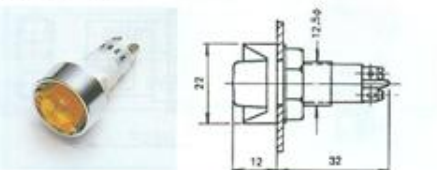
NPLF-25B



NPLS-30A



PILOT LAMP

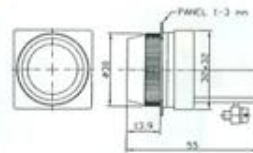
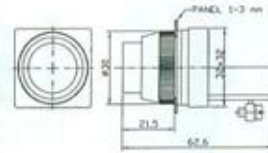
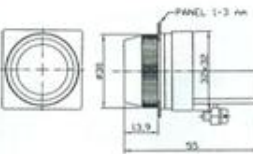
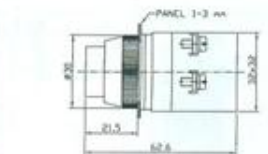
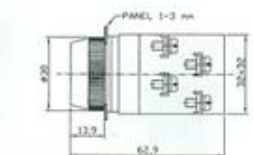
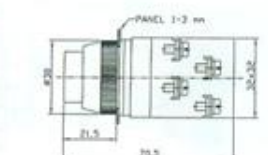
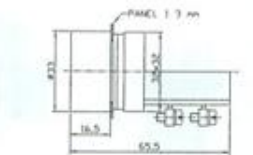
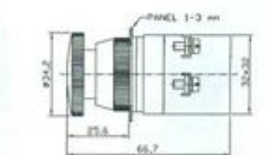
PL-1601 16φ 	PL1001 10φ 
PL-1602 16φ 	PL1002 10φ 
PL1603 	PL1005 10φ 
PL-1604 16φ 	PL08 8φ 
PL1605 16φ 	L-8 6, 12, 24 VDC LED LAMP 
NPL-12 12φ 	

PUSH BUTTON SWITCH

PB	25	1	a	R
Type	Mounting hole	No. of contact	Type of contact blocks	Head color
PB: Flat head PBL: Long head PBR: Rain proof EPB: Mushroom head EPBL: Big mushroom head EPBLR: Big mushroom head with guard ring LEPB: Push Locked PBF: Long head w/guard ring	25: 25mm $\varnothing$ 30: 30mm $\varnothing$	1 - 4	a: 1a (N/O) b: 1b (N/C)	R: Red G: Green Y: Yellow B: Black

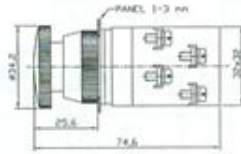
SPECIFICATIONS

AC 125V	AC 250V	AC 500V	DC 125V	DC 250V	DC 500V
10A	6A	3A	2A	1A	0.4A

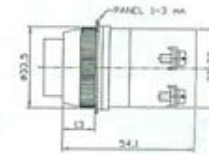
PB25-1a

PBL25-1a

PB25-1b

PBL25-1b

PB2511

PBL25-11

PBR2511

EPB25-1b


PUSH BUTTON SWITCH

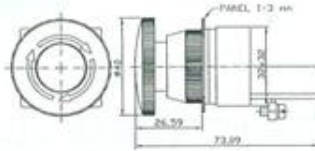
EPB2511



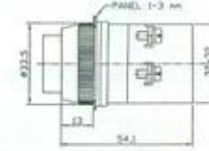
PBL30-1a



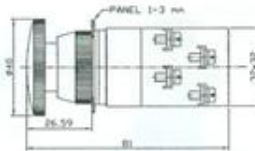
LEPB25-1b



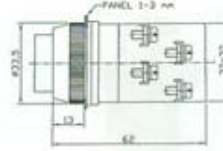
PBL30-1b



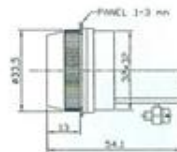
LEPB2511



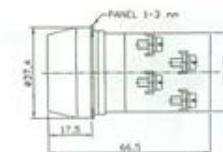
PBL3011



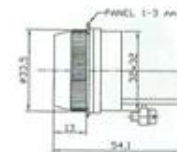
PB30-1a



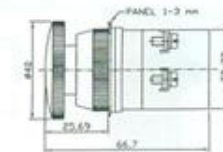
PBR-3011



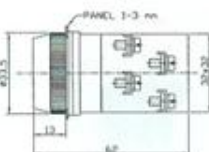
PB30-1b



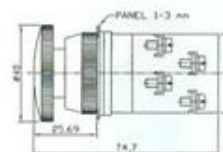
EPB30-1b



PB3011

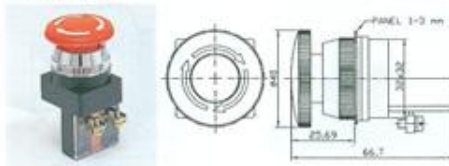


EPB3011

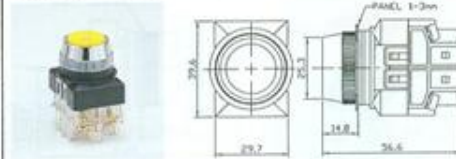


PUSH BUTTON SWITCH

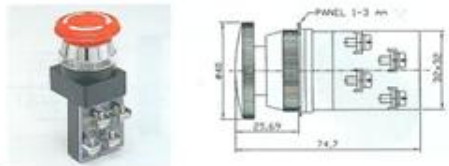
LEPB30-1b



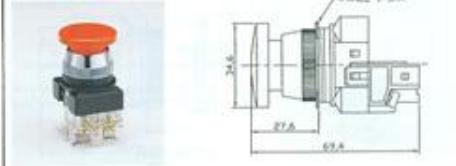
PBK2211 22φ



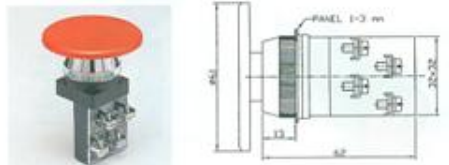
LEPB3011



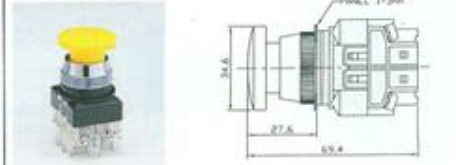
EPBK 22-1b 22φ



EPBL3011



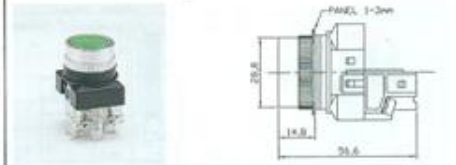
EPBK 2211 22φ



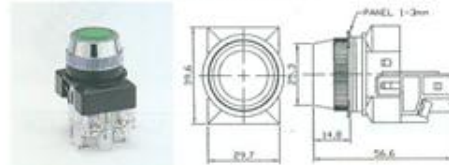
EPBLR3011



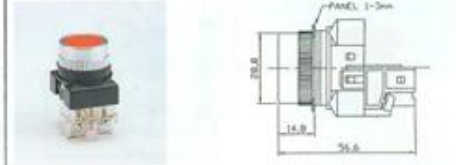
PBK25-1a Mounting hole 25φ



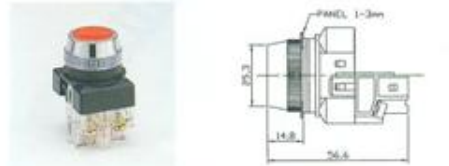
PBK22-1a Mounting hole 22φ



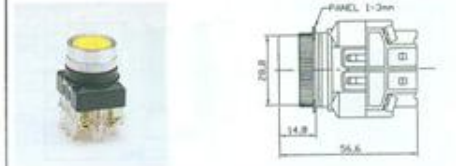
PBK25-1b 25φ



PBK22-1b 22φ

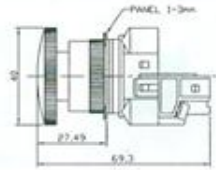


PBK2511 25φ

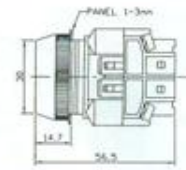


PUSH BUTTON SWITCH

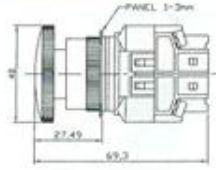
EPBK25-1B 25φ



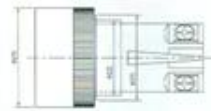
PBK3011 30φ



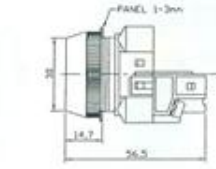
EPBK2511 25φ



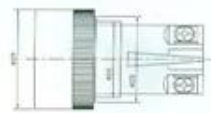
PB22-1A(N/O), 22mm dia



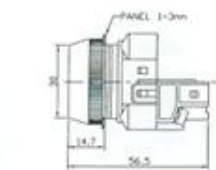
PBK30-1a 30φ



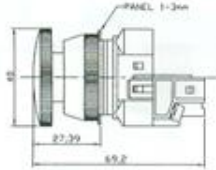
PB22-1B(N/C), 22mm dia



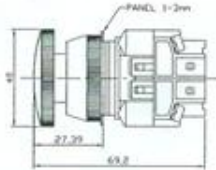
PBK30-1b 30φ



EPBK30-1b 30φ



EPBK3011 30φ

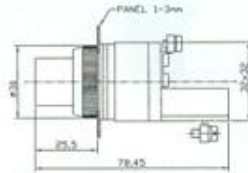


LPBT	25	2	R	
Type	Mounting hole	Voltage		Lens color
LPBT: Standard W/TR	25: 25mm ϕ	1	110V	R: Red
LPBTG: With Guard	30: 30mm ϕ	2	220V	G: Green
LPBN: Standard W/Neon lamp		3	380V W/TR	Y: Yellow
LPBNG: Neon lamp W/Guard		4	440V	B: Black
		5	6V	
		6	18V W/O TR	
		7	24V	
		8	30V	

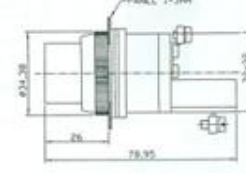
SPECIFICATIONS

AC 125V	AC 250V	AC 500V	DC 125V	DC 250V	DC 500V
10A	6A	3A	2A	1A	0.4A

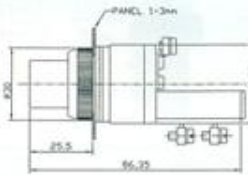
LPBN25-1a, LPBN25-1b



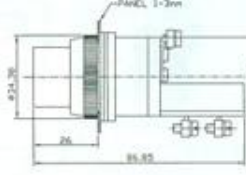
LPBN30-1a, LPBN30-1b



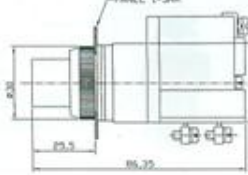
LPBN2511



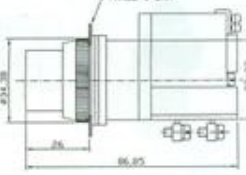
LPBN3011



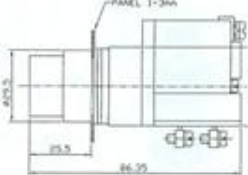
LPBT2511



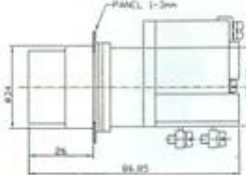
LPBT3011



LPBTG2511



LPBTG3011

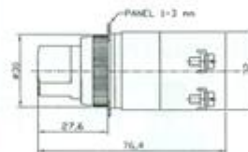
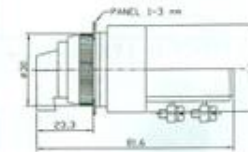
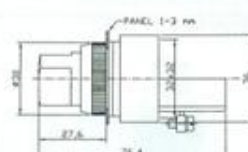
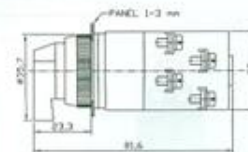
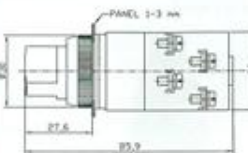
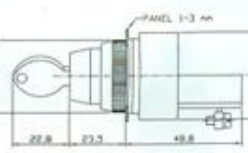
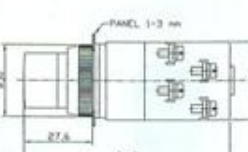
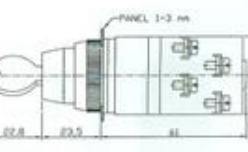


SELECTOR SWITCH

SS	25	1	a	2	B
Type	Mounting hole	No. of contact block fitted	Type of contact block fitted	Position	Knob color
SS: Knob type LSS: Lever operator KSS: Key type	25: 25mm ϕ 30: 30mm ϕ	1 - 4	1a N/O 1b N/C 1a1b (N/O+N/C)	2 position 3 position	R: Red G: Green B: Black

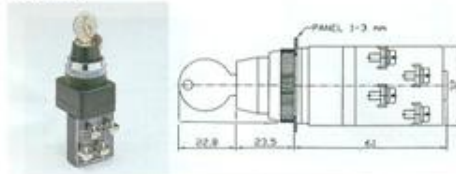
SPECIFICATIONS

AC 125V 10A	AC 250V 6A	AC 500V 3A	DC 125V 2A	DC 250V 1A	DC 500V 0.5A
----------------	---------------	---------------	---------------	---------------	-----------------

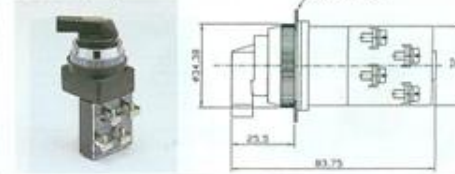
SS25-1a

LSS2512

SS25-1b

LSS2513

SS2512

KSS25-1a

SS2513

KSS2512


SELECTOR SWITCH MONOLEVER SWITCH

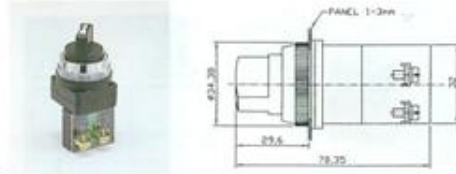
KSS2513



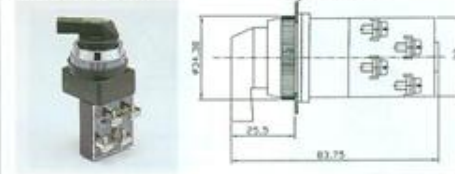
LSS3012, 2 position



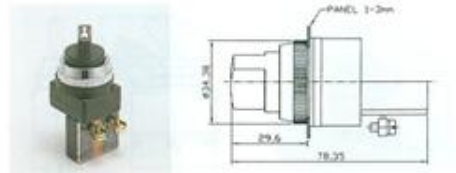
SS30-1a



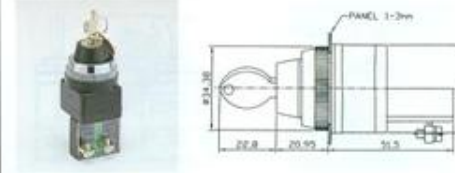
LSS3013, 3 position



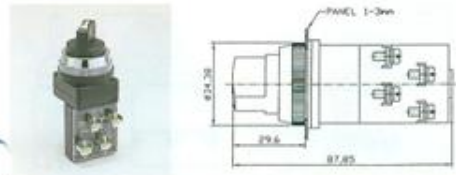
SS30-1b



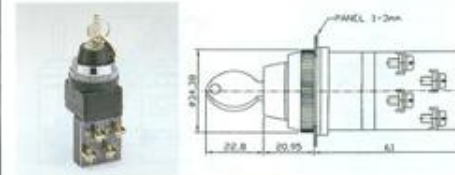
KSS30-1a



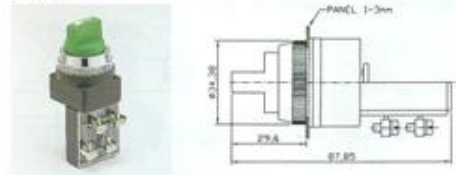
SS3012



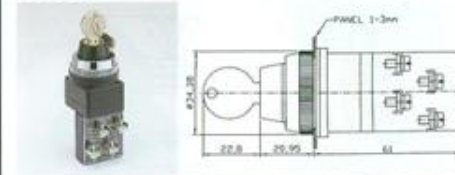
KSS3012



SS3013



KSS3013

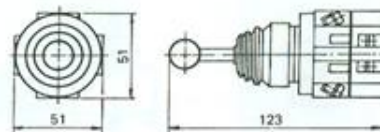


MONOLEVER SWITCH MS30-1 (GO ON)



Operation:	1 (GO ON)
	2 (Auto-Return)
	0 (Blockade-enforcing)
Contact:	1a, 2a 1b, 2b 1a, + 1b
	4a 4b
Rating:	110V 5A 220V 3A 440V 1A

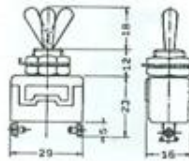
MS30-2 (AUTO RETURN)



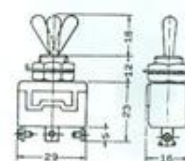
SNAP SWITCHES



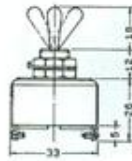
1021 2 Pole ON-OFF



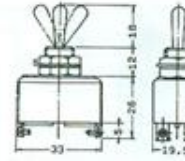
1122B 3 Pole ON→OFF←ON SPRING RETURN



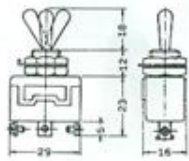
1021A 2 Pole ON→OFF SPRING RETURN



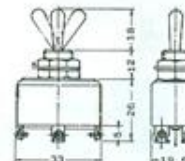
1221 4 POLE ON-OFF



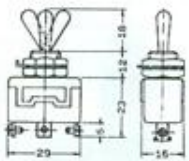
1121 3 Pole ON-ON



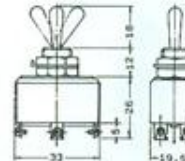
1321 6 POLE ON-ON



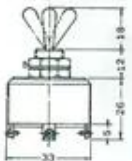
1121A 3 Pole ON→(ON) SPRING RETURN



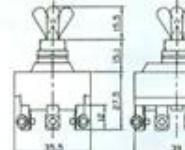
1322 6 POLE ON-OFF-ON



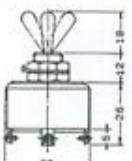
1122 3 Pole ON-OFF-ON



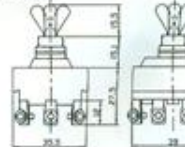
902 9 POLE CN-ON 3 PDT
903 9 POLE CN-OFF-ON 3 PDT



1122A 3 Pole ON-OFF←(ON) SPRING RETURN



1202 12 POLE CN-ON 4 PDT
1203 12 POLE CN-OFF-ON 4 PDT



SPECIFICATIONS				
Type	SP310	SP315	SP330	SP320
Rating	10A 250VAC 1.5kw	15A 250VAC 2.2kW	30A 250VAC 3.7kW	20A 250VAC 2.2kW
Mounting	Surface mounting	Surface mounting	Surface mounting	Flush mounting
Phase	3	3	3	3

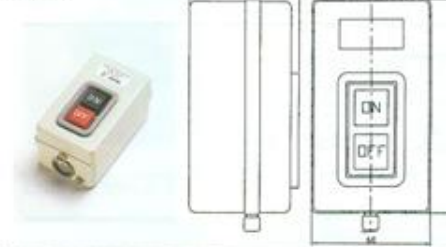
SP310



SP315



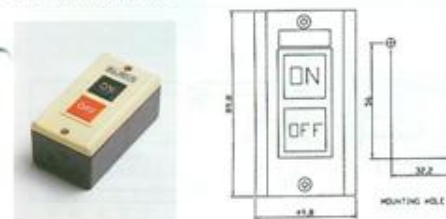
SP330



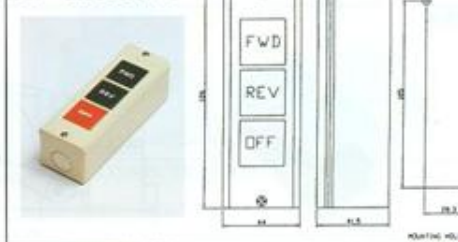
SP320



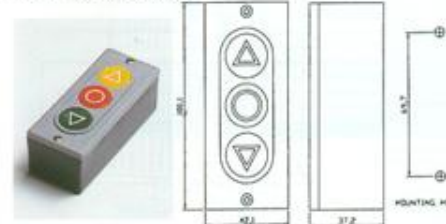
PB2 5A 250V AC



PB3 5A 250V AC



PB3B 5A 250V AC

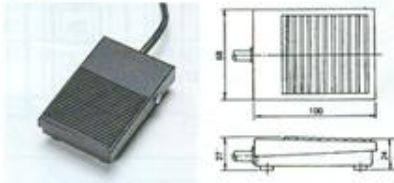


FOOT SWITCH

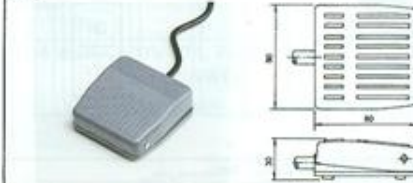


Type	Rating	Type switch enclosed	Contact	Cord Spec.	Enclosure material
FS-1	10A 250VAC	SPDT Micro Sw.	1A1B	PVC, 0.75mm ² , 3C	Ferrous cover
FS-2	10A 250VAC	SPDT Micro Sw.	1A1B	PVC, 0.75mm ² , 3C	Poly-carbonate
FS-3A	10A 250VAC	Micro Sw. Momentary	1A1B	PVC, 0.75mm ² , 3C	Aluminum
FS-3B	15A 250VAC	1306 Long Head Micro Sw.	1A1B	PVC, 0.75mm ² , 3C	Aluminum
FS-3C	10A 250VAC	1306 Long Head Micro Sw.	2A2B	PVC, 0.75mm ² , 3C	Aluminum
FS-4	15A 250VAC	1305 Long Head Micro Sw.	1A1B	Accessory: Cable gland (No Cable)	Aluminum
FS-5	15A 250VAC	1305 Long Head Micro Sw.	1A1B	Accessory: Cable gland (No Cable)	Aluminum
FS-4A	15A 250VAC	1305 Long Head Micro Sw.	2A2B	Accessory: Cable gland (No Cable)	Aluminum
FS-5A	15A 250VAC	1305 Long Head Micro Sw.	2A2B	Accessory: Cable gland (No Cable)	Aluminum

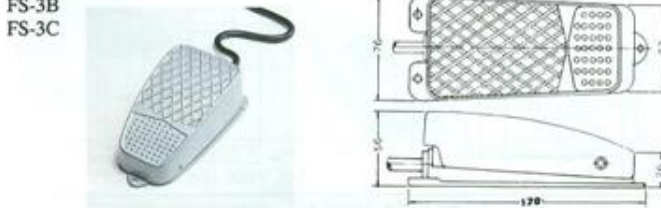
FS-1



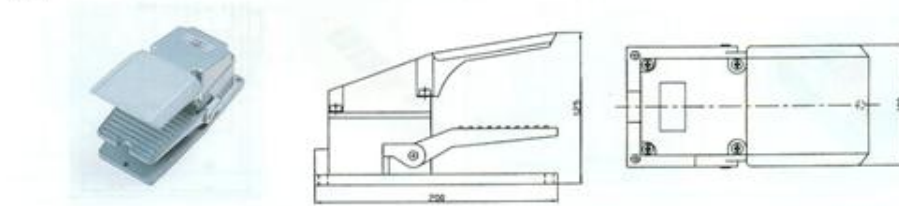
FS-2



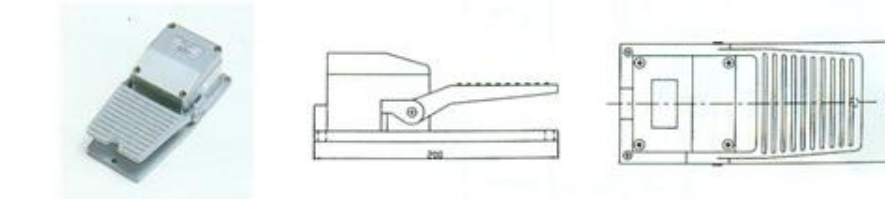
FS-3A
FS-3B
FS-3C



FS-4



FS-5



BUZZER & SIREN

Type	Voltage	AC or DC
ABF: Flush mounting	12V	DC
ABS: Surface mounting	24V	
BF-30: 30 φ Flush	110V	
BF-30: 30 φ Flush	220V	AC
BF-30: 30 φ Flush		

SPECIFICATION

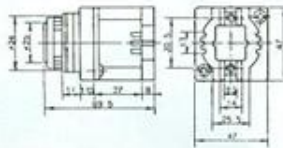
Service life: Over than 30 minutes (Continue)

Volume: BF-30: Over than 75 dB

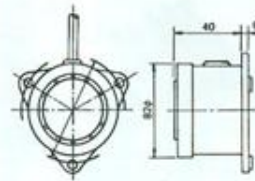
ABF 75 ABS 80 series: Over than 85 dB

BL-100 series: Over than 95 dB

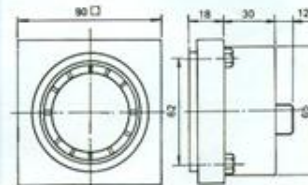
BF-30



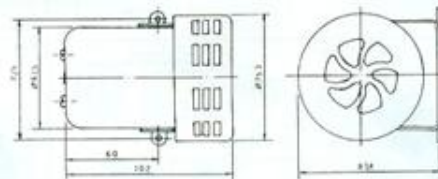
ABF-75 Rating: AC 110, 220V, DC 12V, 24V



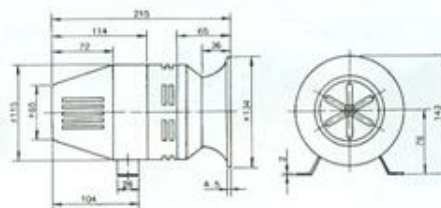
ABS-80



SA-80

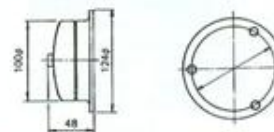


SA-140



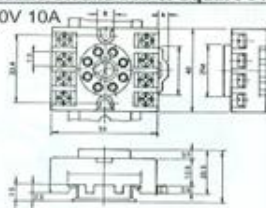
BL-100

Voltage: DC 6V, 12V, 24V
AC 110V, 220V 50/60HZ

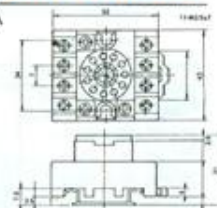


RELAY BASE SOCKET Round Pin & Square Pin

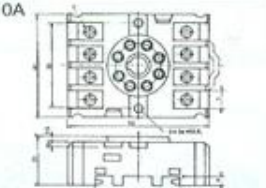
PF083N 8 Pins 300V 10A



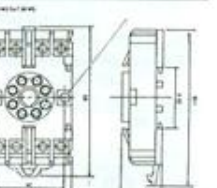
PF113N 11 Pins 300V 10A



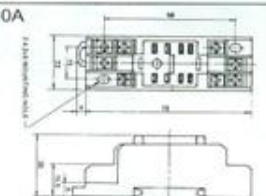
PF085A 300V 10A



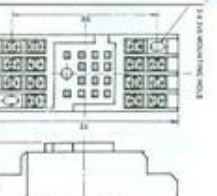
P2C F08 300V 10A



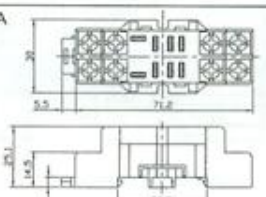
PYF08A 300V 10A



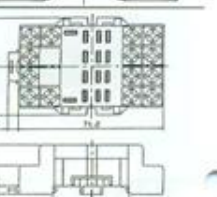
PYF14A 300V 10A



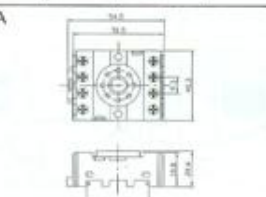
PTF08A 300V 15A



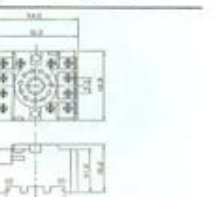
PTF14A 300V 15A



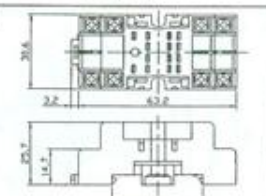
PF083AE 300V 10A



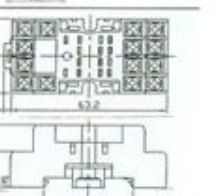
PF113AE 300V 10A



NDSQ-8 300V 7A

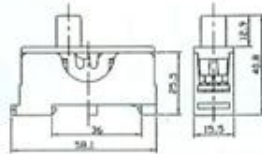


NDSQ-14 300V 7A

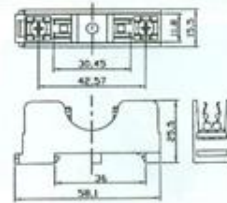


FUSE BOX

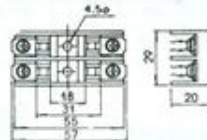
FS-10, 10A 1 Pole



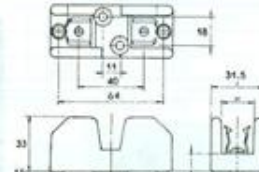
FS-101, 10A 1 Pole



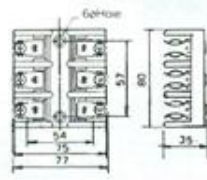
FS-102, 10A 2 Pole



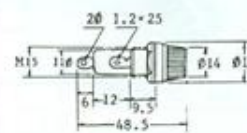
FS-301, 30A 1 Pole



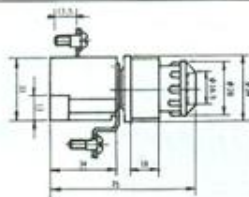
FS-303, 30a 3 Pole



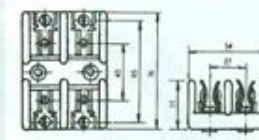
FS-630, 1A-30A



D Fuse E-16



FS-302, 30A 2 Pole



Fu-630 (1A-30A)



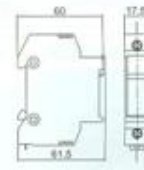
6ϕ X 30

Fu-1450 (1A-50A)

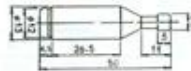


14ϕ X 50

FSR-32N Rail type Fuse holder



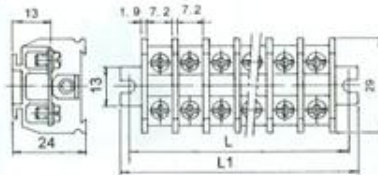
Fu-16 (2A-30A)



Rating : 32A max,600VAC

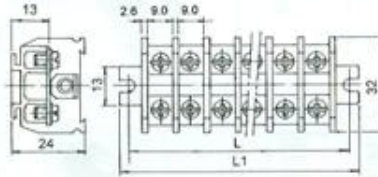
Fuse Size : 10 ϕ X38mmL

TB-10 10A 300VAC PITCH: 9.1mm



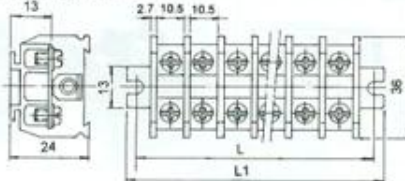
NO. OF POLES	2	3	4	5	6	7	8	9	10	11	12
L	27.5	36.6	45.7	54.8	63.9	73	82.1	91.2	100.3	109.4	118.5
L1	33.9	43.0	52.1	61.2	70.3	79.4	88.5	97.6	106.7	115.8	124.9

TB-20 20A 300VAC PITCH: 11.6mm



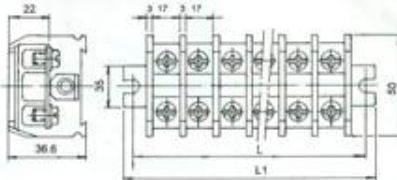
NO. OF POLES	2	3	4	5	6	7	8	9	10	11	12
L	33.2	44.8	56.4	68	79.6	91.2	102.8	114.4	126	137.6	149.2
L1	39.6	51.2	62.8	74.4	86	97.6	109.2	120.8	132.4	144	155.6

TB-30 30A 300VAC PITCH: 13.2mm



NO. OF POLES	2	3	4	5	6	7	8	9	10	11	12
L	37.2	50.4	63.6	76.8	90	103.2	116.4	129.6	142.8	156	169.2
L1	43.6	56.8	70.0	83.2	96.4	109.6	122.8	136.0	149.2	162.4	175.6

TB-60 60A 300VAC PITCH: 20mm

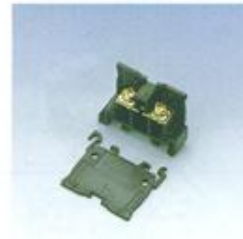
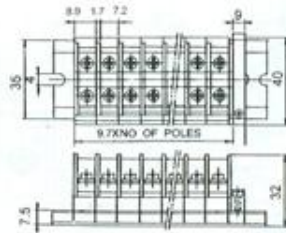


NO. OF POLES	2	3	4	5	6	7	8	9	10	11	12
L	57	77	97	117	137	157	177	197	217	237	257
L1	67	87	107	127	147	167	187	207	227	247	267

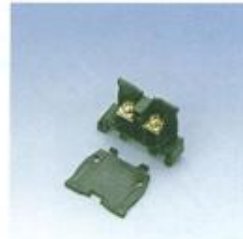
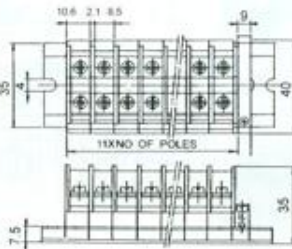
RAIL MOUNT TERMINAL BLOCK



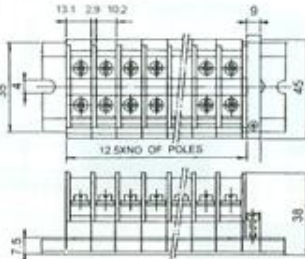
TR-10 2 mm² 10A 300VAC PITCH: 8.9 mm



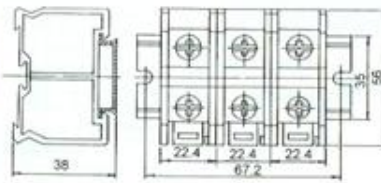
TR-20 3.5 mm² 20A 300VAC PITCH: 10.6 mm



TR-30 6 mm² 30A 300VAC PITCH: 13.1 mm

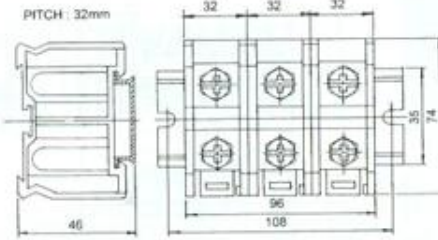


TR-60 22 mm² 60A 300VAC PITCH: 22.4 mm

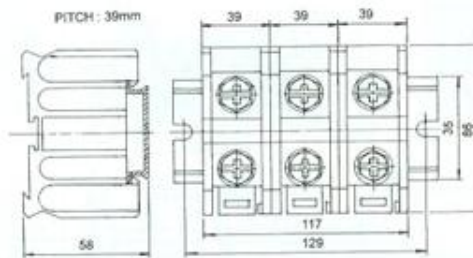


RAIL MOUNT TERMINAL BLOCK

TR-100 38 mm² 100A 300VAC PITCH:32mm

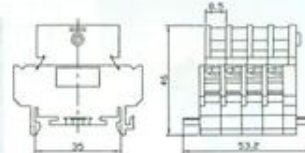


TR-200 100 mm² 200A 300VAC PITCH:39mm

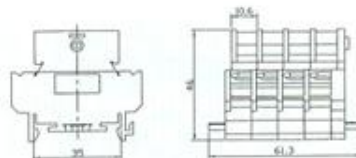


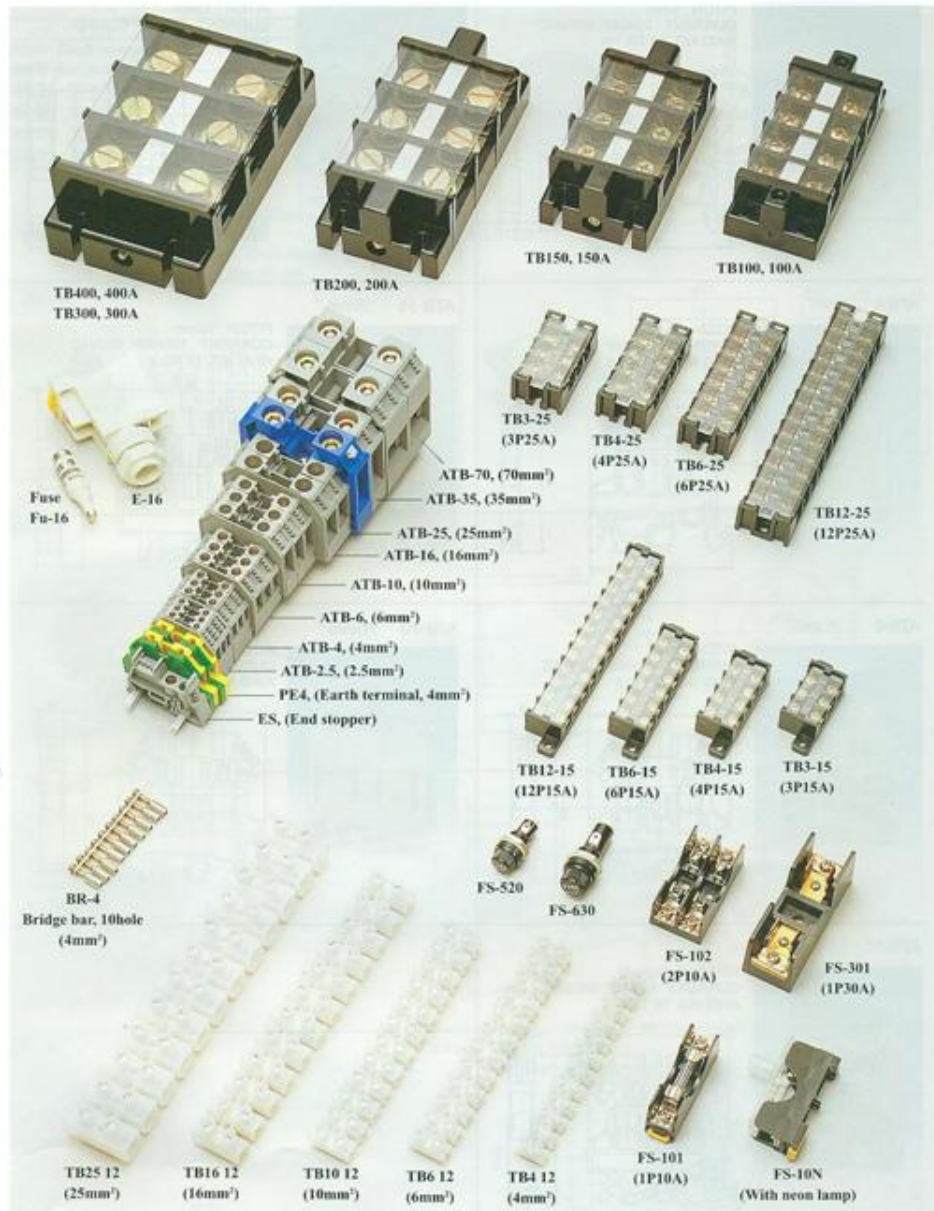
TR-200 with cover
TR-100 with cover
TR-60 with cover

DTB-10 10A 300VAC double deck terminal block pitch : 8.5mm



DTB-20 20A 300VAC double deck terminal pitch : 10.6mm

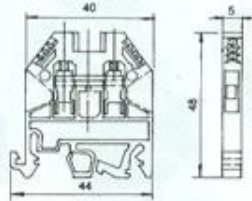




ATB-2.5 2.5mm²



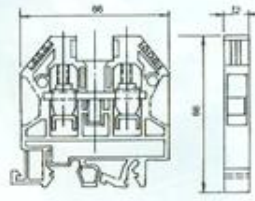
PITCH : 5mm
CURRENT : 20AMP 600VAC
AWG NO. 22 TO 10



ATB-16 16mm²



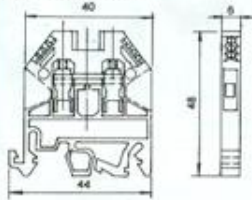
PITCH : 12mm
CURRENT : 75AMP 600VAC
AWG NO. 14 TO 6



ATB-4 4mm²



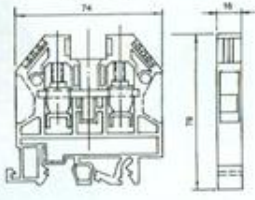
PITCH : 6mm
CURRENT : 30AMP 600VAC
AWG NO. 22 TO 10



ATB-35 35mm²



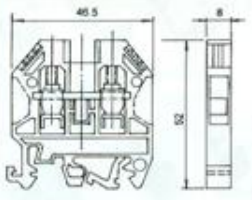
PITCH : 16mm
CURRENT : 100AMP 600VAC
AWG NO. 12 TO 2



ATB-6 6mm²



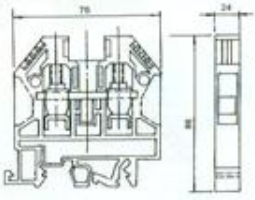
PITCH : 6mm
CURRENT : 40AMP 600VAC
AWG NO. 22 TO 8



ATB-70 70mm²



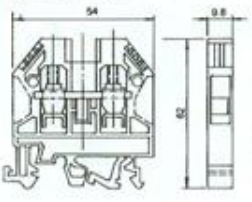
PITCH : 24mm
CURRENT : 165AMP 600VAC
AWG NO. 4 TO 2/0 AWG



ATB-10 10mm²



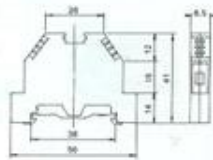
PITCH : 9.8mm
CURRENT : 60AMP 600VAC
AWG NO. 18 TO 6



SCREW CLAMP TERMINAL BLOCK

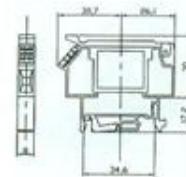
PE-4 4mm²

EARTH TERMINAL BLOCK
CURRENT: 30A
AWG NO. 22 TO 10



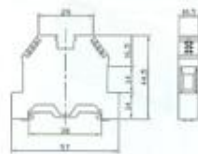
FUSE TERMINAL BLOCK

FT-4 4mm², FT-4L (WITH LED LAMP)



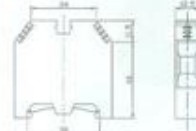
PE-10 10mm²

EARTH TERMINAL BLOCK
TERMINAL WIDTH: 10.5mm
AWG 20-6
RATED SURGE VOLTAGE: 8kV
COLOR: GREEN/YELLOW

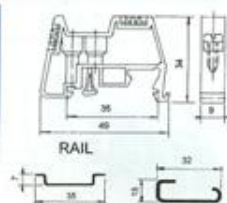


PE-16 16mm²

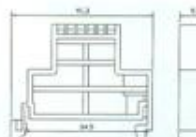
EARTH TERMINAL BLOCK
TERMINAL WIDTH 12.5mm
AWG 10
RATED SURGE VOLTAGE: 12kV
COLOR: GREEN/YELLOW



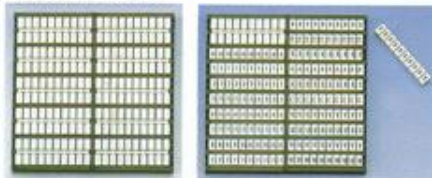
END STOPPER ES-1



END STOPPER ES-2



CABLE MARKER: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9,
A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T,
U, V, W, X, Y, Z.



PART NO.	NO. OF LETTERS	LETTER SIZE (mm)	PACKING
CM-1	200/PALLET	2.4L X 4.4W	5 PALLET/BOX
CM-2	100/PALLET	5.0L X 4.4W	5 PALLET/BOX

CROSS CONNECTION BAR

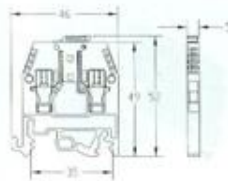


PART NO.	USAGE	PITCH	POLES AVAILABLE
CB2.5	2.5mm ²	5mm	2 poles ~ 80 poles
CB4	4mm ²	6mm	2 poles ~ 70 poles
CB6	6mm ²	8mm	2 poles ~ 40 poles
CB10	10 mm ²	10mm	2 poles ~ 40 poles

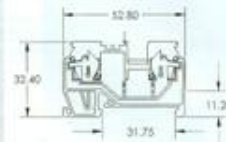
**DISCONNECT TERMINAL BLOCK,
FEED-THROUGH TERMINAL BLOCK**



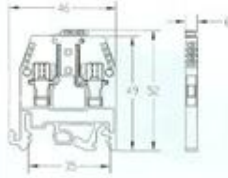
ST2.5 2.5mm², 380V 10A, Pitch 5 mm
22 ~ 12 AWG 150V 10A



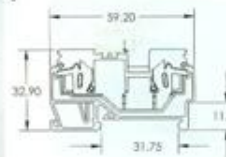
FTB2.5 2.5mm², 600V 20A, Pitch 5 mm
28 ~ 12 AWG



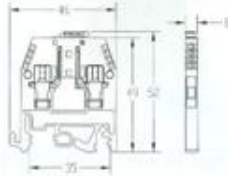
ST4 4mm², 400V 10A, Pitch 6 mm
22 ~ 10 AWG 300V 10A



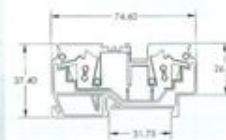
FTB4 4mm², 600V 20A, Pitch 6 mm
28 ~ 12 AWG



ST6 6mm², 400V 15A, Pitch 8 mm
22 ~ 10 AWG 300V 20A

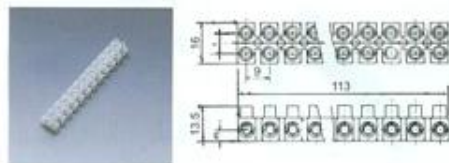


FTB6 6mm², 600V 30A, Pitch 8 mm
24 ~ 10 AWG

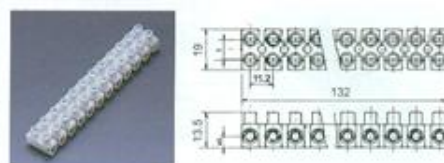


TERMINAL BLOCK

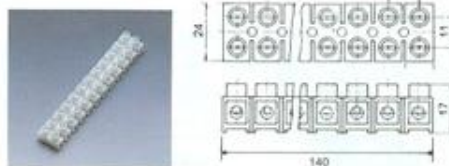
TB612 6mm² (F6)



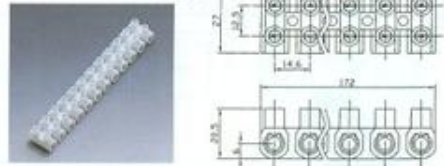
TB1012 10mm² (W10)



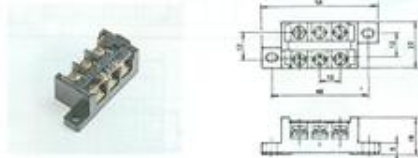
TB1612 16mm² (W12)



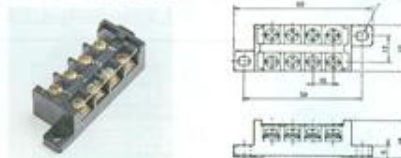
TB2512 25mm² (F16)



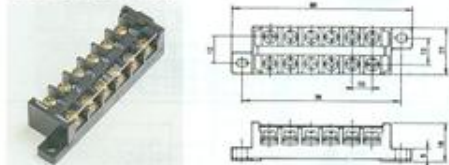
TB3-15 3 Pole 15A



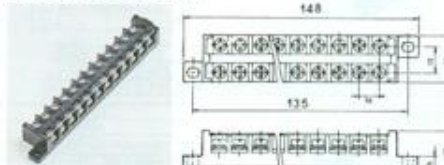
TB4-15 4 Pole 15A



TB6-15 6 Pole 15A



TB12-15 12 Pole 15A



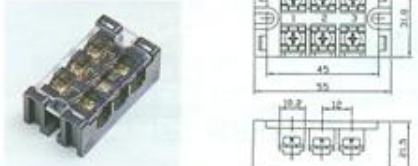
S-10 Support



S-20 Support



TB3-25 3P 25A

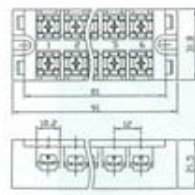


TB4-25 4P 25A

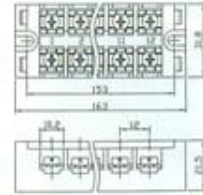


TERMINAL BLOCK

TB6-25 6P 25A

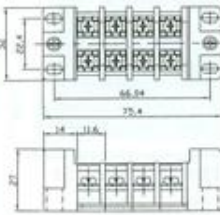


TB12-25 12P 25A

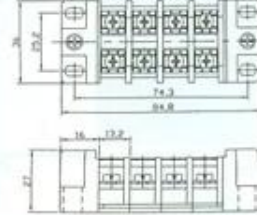


TERMINAL BLOCK JOINT TYPE

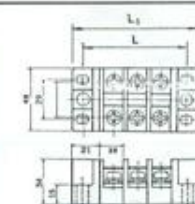
TB-20A



TB-30A

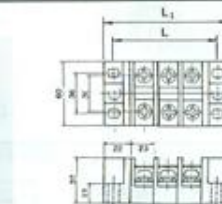


TB-60A



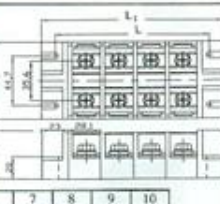
No. of Pole	3	4	5	6	7	8	9	10
L	82	100	118	136	154	172	190	208
L ₁	95	113	131	149	167	185	203	221

TB-100A



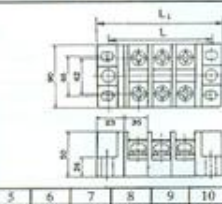
No. of Pole	3	4	5	6	7	8	9	10
L	95	118	141	164	187	210	233	256
L ₁	112	135	158	181	204	227	250	273

TB-150A



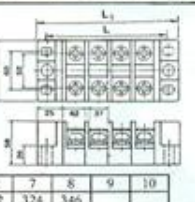
No. of Pole	3	4	5	6	7	8	9	10
L								
L ₁								

TB-200A



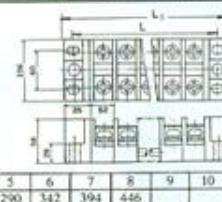
No. of Pole	3	4	5	6	7	8	9	10
L	131	166	201	236	271	306	341	376
L ₁	151	186	221	256	291	326	361	396

TB-300A



No. of Pole	3	4	5	6	7	8	9	10
L	156	198	240	282	324	346		
L ₁	176	218	260	302	344	386		

TB-400A



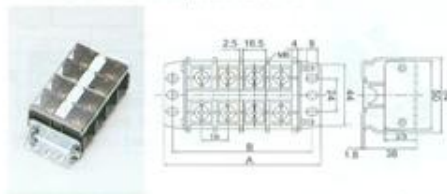
No. of Pole	3	4	5	6	7	8	9	10
L	186	238	290	342	394	446		
L ₁	206	258	310	362	414	466		

TERMINAL BLOCK JOINT TYPE



AT60 60A 600VAC, 14mm²

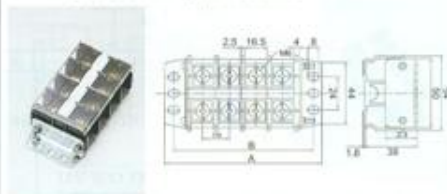
Screw : M6 mm ϕ , Pitch : 19mm



POLE	1	2	3	4	5	6	7	8	9	10
A	55	74	93	112	131	150	169	188	207	226
B	42	61	80	99	118	137	150	175	194	213

AT80 80A 600VAC, 22mm²

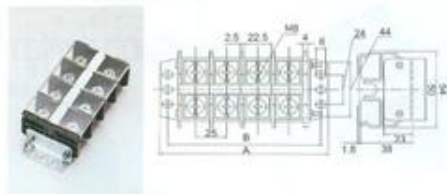
Screw : M6 mm ϕ , Pitch : 19mm



POLE	1	2	3	4	5	6	7	8	9	10
A	55	74	93	112	131	150	169	188	207	226
B	42	61	80	99	118	137	150	175	194	213

AT100 100A 600VAC, 38mm² Pitch 25mm

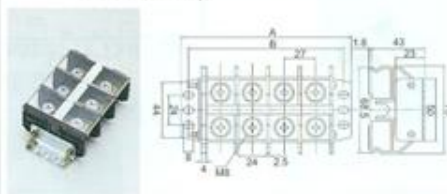
Screw : M8 mm ϕ



POLE	1	2	3	4	5	6	7	8
A	62	87	112	137	162	187	212	237
B	50	75	100	125	150	175	200	225

AT150 150A 600VAC, 60mm² Pitch 27mm

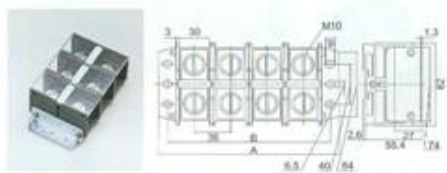
Screw : M8 mm ϕ



POLE	1	2	3	4	5	6	7	8
A	63	90	117	144	171	198	225	252
B	51	78	105	132	159	187	213	240

AT200 200A 600VAC, 100mm² Pitch 36mm

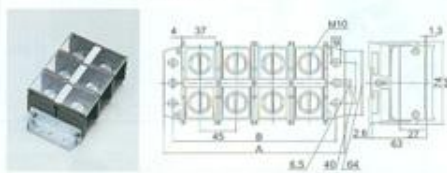
Screw : M10mm ϕ



POLE	1	2	3	4	5	6
A	75	111	147	183	219	255
B	56	92	128	164	200	236

AT300 300A 600VAC, 150mm² Pitch 45mm

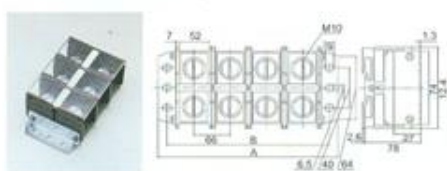
Screw : M10 mm ϕ



Pole	1	2	3	4	5	6
A	83	128	173	218	263	308
B	64	109	154	199	244	289

AT400 400A 600VAC, 250mm² Pitch 64mm

Screw : M12mm ϕ

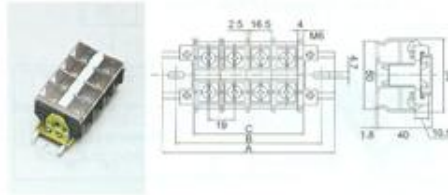


POLE	1	2	3	4
A	104	170	236	302
B	85	151	217	283

RAIL TYPE TERMINAL BLOCK

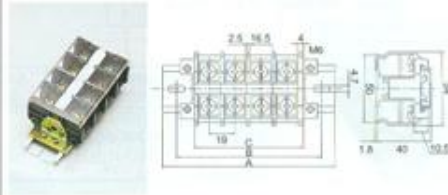


ATR60 60A 600VAC, 14mm², Screw: M6, Pitch: 19mm



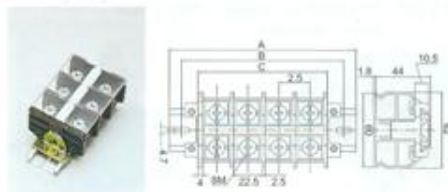
POLE	1	2	3	4	5	6	7	8	9	10
A	60	79	98	118	137	156	175	194	213	231
B	42	61	80	99	118	137	156	175	194	213
C	23	42	61	80	99	118	137	156	175	194

ATR80 80A 600VAC, 22mm², Screw: M6, Pitch: 19mm



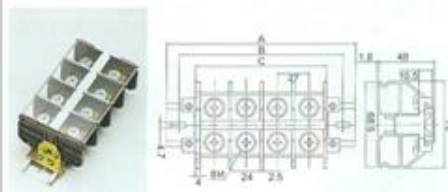
POLE	1	2	3	4	5	6	7	8	9	10
A	60	79	98	118	137	156	175	194	213	231
B	42	61	80	99	118	137	156	175	194	213
C	23	42	61	80	99	118	137	156	175	194

ATR100 100A 600VAC, 38mm², Screw: M8, Pitch: 25mm



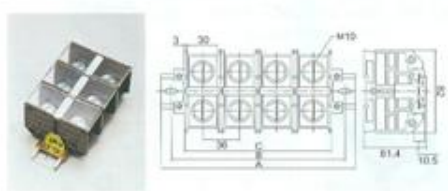
POLE	1	2	3	4	5	6	7	8	9	10
A	68	93	118	143	168	193	218	243	268	293
B	50	75	100	125	150	175	200	225	250	275
C	29	54	79	104	129	154	179	204	229	254

ATR150 150A 600VAC, 60mm², Screw: M8, Pitch: 27mm



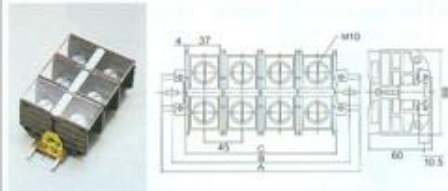
POLE	1	2	3	4	5	6	7	8	9	10
A	69	96	123	150	177	205	231	258	285	312
B	51	78	105	132	159	187	213	240	267	294
C	31	58	85	112	139	166	193	220	247	274

ATR200 200A 600VAC, 100mm², Screw: M10, Pitch: 36mm



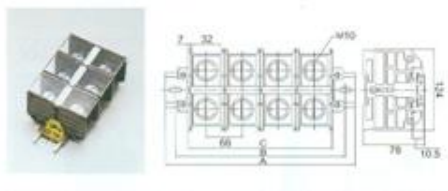
POLE	1	2	3	4	5	6	7	8	9	10
A	74	110	146	182	218	254	290	326	362	398
B	56	92	128	164	200	236	272	308	344	380
C	36	72	108	144	180	216	252	288	324	360

ATR300 300A 600VAC, 150mm², Screw: M10, Pitch: 45mm



POLE	1	2	3	4	5	6	7	8	9	10
A	82	127	172	207	262	307	352	397	442	487
B	64	109	154	199	244	289	334	379	424	469
C	45	90	135	180	225	270	315	360	405	450

ATR400 400A 600VAC, 250mm², Screw: M12, Pitch: 66mm

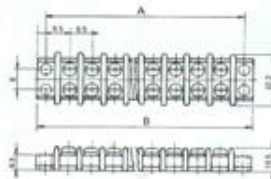


POLE	1	2	3	4	5	6	7	8	9	10
A	106	172	238	304	370	436	502	568	634	700
B	86	152	218	284	350	416	482	548	614	680
C	66	132	198	264	330	396	462	528	594	660

DOUBLE ROW TERMINAL STRIPS



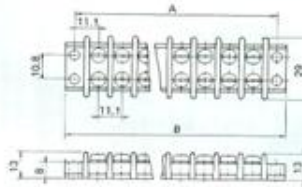
TB14 Pitch: 0.375" (9.5mm), Rating: 15A 300VAC, Material: Thermoplastic UL94-V0



UNIT IN INCH

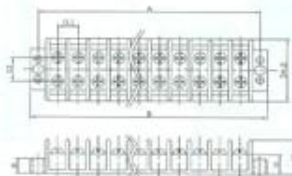
NO. OF POLE	A	B	NO. OF POLE	A	B
	INCH	INCH		INCH	INCH
1	0.75	1.03	17	6.75	7.03
2	1.13	1.41	18	7.13	7.41
3	1.50	1.78	19	7.50	7.78
4	1.88	2.16	20	7.88	8.16
5	2.25	2.53	21	8.25	8.53
6	2.63	2.91	22	8.63	8.91
7	3.00	3.28	23	9.00	9.28
8	3.38	3.66	24	9.38	9.66
9	3.75	4.03	25	9.75	10.03
10	4.13	4.41	26	10.13	10.41
11	4.50	4.78	27	10.50	10.78
12	4.88	5.16	28	10.88	11.16
13	5.25	5.53	29	11.25	11.53
14	5.63	5.91	30	11.63	11.91
15	6.00	6.28	x	x	x
16	6.38	6.66	x	x	x

TB18 Pitch: 0.4375" (11.1mm), Rating: 20A 300VAC, Material: Thermoplastic UL94-V0



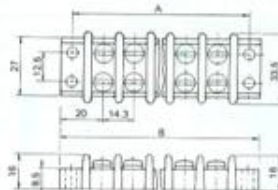
NO. OF POLE	A	B	NO. OF POLE	A	B
	INCH	INCH		INCH	INCH
1	0.88	1.10	14	6.56	6.88
2	1.31	1.63	15	7.00	7.31
3	1.75	2.06	16	7.44	7.75
4	2.19	2.50	17	7.88	8.19
5	2.63	2.94	18	8.31	8.63
6	3.06	3.38	19	8.75	9.06
7	3.50	3.81	20	9.19	9.50
8	3.94	4.25	21	9.63	9.94
9	4.38	4.69	22	10.06	10.38
10	4.81	5.13	23	10.50	10.81
11	5.25	5.56	24	10.94	11.25
12	5.69	6.00	25	11.38	11.69
13	6.13	6.44	26	11.82	12.13

TB78 Pitch: 0.4375" (11.1mm), Rating: 20A 300VAC, Material: Thermoplastic UL94-V0



NO. OF POLE	A	B	NO. OF POLE	A	B
	INCH	INCH		INCH	INCH
1	0.88	1.10	14	6.56	6.88
2	1.31	1.63	15	7.00	7.31
3	1.75	2.06	16	7.44	7.75
4	2.19	2.50	17	7.88	8.19
5	2.63	2.94	18	8.31	8.63
6	3.06	3.38	19	8.75	9.06
7	3.50	3.81	20	9.19	9.50
8	3.94	4.25	21	9.63	9.94
9	4.38	4.69	22	10.06	10.38
10	4.81	5.13	23	10.50	10.81
11	5.25	5.56	24	10.94	11.25
12	5.69	6.00	25	11.38	11.69
13	6.13	6.44	26	11.82	12.13

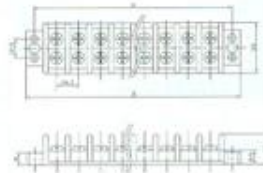
TB21 Pitch: 0.5625" (14.3mm), Rating: 30A 300VAC, Material: Thermoplastic UL94-V0



NO. OF POLE	A	B	NO. OF POLE	A	B
	INCH	INCH		INCH	INCH
1	1.13	1.57	14	8.44	8.88
2	1.69	2.13	15	9.00	9.44
3	2.25	2.69	16	9.56	10.00
4	2.81	3.25	17	10.13	10.56
5	3.38	3.82	18	10.69	11.13
6	3.94	4.38	19	11.25	11.69
7	4.50	4.94	20	11.81	12.25
8	5.06	5.50	21	12.38	12.81
9	5.63	6.06	22	12.94	13.38
10	6.19	6.63	23	13.50	13.94
11	6.75	7.19	24	14.06	14.50
12	7.31	7.75	25	14.63	15.06
13	7.88	8.31	26	15.19	15.63

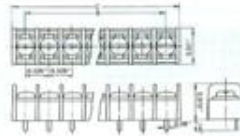
SINGLE ROW TERMINAL STRIPS

TB22 Pitch: 0.5625" (14.3mm), Rating: 30A 300VAC, Material: Thermoplastic UL94-V0



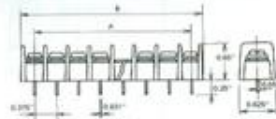
NO. OF POLE	A INCH	B INCH	NO. OF POLE	A INCH	B INCH
1	1.13	1.67	14	8.44	8.88
2	1.69	2.13	15	9.00	9.44
3	2.25	2.69	16	9.56	10.00
4	2.81	3.25	17	10.12	10.56
5	3.38	3.82	18	10.68	11.12
6	3.94	4.38	19	11.25	11.69
7	4.50	4.94	20	11.81	12.25
8	5.06	5.50	21	12.38	12.81
9	5.63	6.06	22	12.94	13.38
10	6.19	6.63	23	13.50	13.94
11	6.75	7.19	24	14.06	14.50
12	7.31	7.75	25	14.63	15.06
13	7.88	8.31	26	15.19	15.63

TB825 Pitch: 0.325" (8.25mm), Rating: 20A 300VAC, Material: Thermoplastic UL94-V0



NO. OF POLE	B INCH	C INCH	NO. OF POLE	B INCH	C INCH
3	0.65	1.00	16	4.69	5.29
4	0.99	1.38	17	5.20	5.81
5	1.30	1.71	18	5.53	6.03
6	1.63	2.03	19	5.86	6.26
7	1.96	2.36	20	6.18	6.60
8	2.28	2.69	21	6.50	6.91
9	2.60	3.01	22	6.83	7.24
10	2.93	3.34	23	7.15	7.60
11	3.25	3.66	24	7.48	7.89
12	3.58	3.99	25	7.80	8.21
13	3.90	4.31	26	8.13	8.54
14	4.23	4.64	27	8.45	8.86
15	4.56	4.96	28	8.78	9.19

TB953 Pitch: 0.375" (9.53mm), Rating: 20A 300VAC, Material: Thermoplastic UL94-V0



NO. OF POLE	A INCH	B INCH	NO. OF POLE	A INCH	B INCH
1	0.375	0.45	15	5.625	5.75
2	0.75	0.83	16	6.00	6.08
3	1.125	1.20	17	6.375	6.45
4	1.50	1.58	18	6.75	6.83
5	1.875	1.95	19	7.125	7.20
6	2.25	2.33	20	7.50	7.58
7	2.625	2.70	21	7.875	7.95
8	3.00	3.08	22	8.25	8.33
9	3.375	3.45	23	8.625	8.70
10	3.75	3.83	24	9.00	9.08
11	4.125	4.20	25	9.375	9.45
12	4.50	4.58	26	9.75	9.83
13	4.875	4.95	27	10.125	10.20
14	5.25	5.33	28	10.50	10.57

BUS BAR INSULATOR



MODEL	SM25	SM30	SM35	SM40	SM51	SM76
TENSILE STRENGTH (lbs)	500	550	600	650	1000	1500
TORQUE STRENGTH (ft.lbs)	6	8	10	10	20	40
VOLTAGE WITHSTAND (kV)	6	8	10	12	15	25
SCREW (mm)	6	8	8	8	8	10
TOTAL HEIGHT (mm)	25	30	35	40	51	76
WEIGHT (g)	25	46	52	85	88	235

WARNING LIGHT

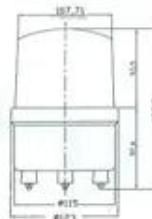
A100



Color: Red, Yellow, Green, Blue

Voltage	Current	Rotary RPM	Bulb	Weight
DC 12V	0.7A	150	10W	
DC 24V	0.34A	150	10W	
AC 110V	0.1A	150	10W	
AC 220V	0.05A	150	10W	

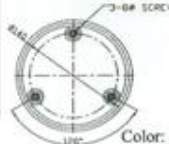
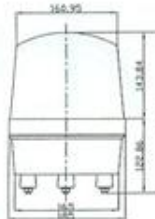
A130



Color: Red, Yellow, Green, Blue

Voltage	Current	Rotary RPM	Bulb	Weight
DC 12V	1A	150	20W	
DC 24V	0.5A	150	20W	
AC 110V	0.1A	150	20W	
AC 220V	0.05A	150	20W	

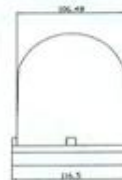
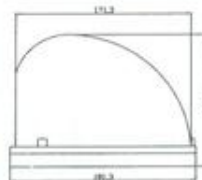
A180



Color: Red, Yellow, Green, Blue

Voltage	Current	Rotary RPM	Bulb	Weight
DC 12V	3A	180	40W	
DC 24V	2.5A	180	40W	
AC 110V	0.4A	180	40W	
AC 220V	0.2A	180	40W	

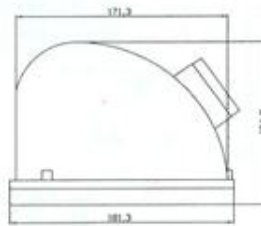
ADS-12C



Color: Red, Yellow, Green, Blue

Voltage	Current	Rotary RPM	Bulb	Weight
DC 12V	1.7A	160	20W	
DC 24V	0.8A	160	20W	

WARNING LIGHT
ADS-12SC

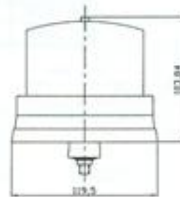


Voltage	Current	Rotary RPM	Bulb	Weight
DC 12V	1.8A	160	20W	



Green, Blue
Color: Red, Yellow,

ACX-12



Voltage	Bulb	Weight
12V	15W	
24V	15W	
110V	15W	
220V	15W	

Color: Red, Yellow, Blue

ACX-3C

Power source: #3 batteries x 2

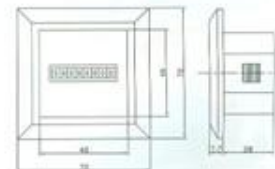


Color: Red, Yellow, Blue

HOUR METER AHM-1



Voltage : AC 110V 220V 50HZ 60HZ
Time range : 0 ~ 99999.99 Hours
Dimensions : 48X48X40 mm
Weight : 50g



CLASSIFICATION		TIMER			TIMER		
FEATURES		MINIATURE HIGH PERFORMANCE IC TIMER			MINIATURE MULT-RANGES IC TIMER		
OUTPUT CAPACITY	MODEL	TH3A-N _Y A	TH3A-N _Y B	TH3A-N _Y C	TH3M-N _Y A	TH3M-N _Y B	TH3M-N _Y C
	1C DELAY	250V 3A		250V 3A	250V 3A		250V 3A
	2C DELAY		250V 3A			250V 3A	
	1A INSTANT	250V 1A			250V 1A		
APPEARANCE							
MOUNTING		SURFACE (N)	FLUSH (Y)		SURFACE (N)	FLUSH (Y)	
VOLTAGE		DC(V): 12,24 AC(V): 12,24,110,120,220 240,346,380,415,440			DC(V): 12,24 AC(V) 50/60Hz:110,120,220 240,380,440		
TIMING RANGE		SEC. 0-1 (S) 0-3 (S) 0-6 (S) 0-12(S) 0-30(S) 0-60(S)	MIN. 0-3 (m) 0-6 (m) 0-12(m) 0-30(m) 0-60(m)	HR. 0-3 (H) 0-6 (H) 0-12(H) 0-30(H) 0-60(H)	A: 1S, 10S, 1M, 10M. B: 3S, 30S, 3M, 30M. C: 6S, 60S, 6M, 60M. D: 1M, 10M, 1H, 10H. E: 3M, 30M, 3H, 30H.		
ACCURACY	REPETITION ERROR	± 1% MAX			± 1% MAX		
	SETTING ERROR	± 10% MAX			± 10% MAX		
	EFFECT OF VOLTAGE	± 1% MAX			± 1% MAX		
	EFFECT OF TEMP	± 2% MAX			2% MAX		
	RESETTING TIME	0.1 SEC MAX			0.1 SEC MAX		
LIFE	MECHANICAL	5x10 ⁶ TIMES			5x10 ⁶ TIMES		
	ELECTRICAL	2x10 ⁵ TIMES			2x10 ⁵ TIMES		
POWER CONSUMPTION		2VA			2VA		
WEIGHT		160g			160g		

TWIN TIMER			TIMER			FLICKER RELAY
ON-OFF TIMING ADJUSTABLE INDIVIDUALLY REPEAT OPERATION			HIGH PERFORMANCE SOLID-STATE TIMER			ON-OFF CYCLIC OPERATION
TTDV-N _Y A	TTDV-N _Y B	TTDV-N _Y C	TSTP-N _Y A	TSTP-N _Y B	TSTP-N _Y C	TH3A-NCF TH3A-YCF
250V 3A		250V 3A	250V 3A		250V 3A	250V 3A
	250V 3A			250V 3A		
250V 1A			250V 1A			
						
SURFACE (N)			SURFACE (N)			SURFACE (N)
FLUSH (Y)			FLUSH (Y)			
DC(V): 12,24 AC(V): 12,24,110,120,220 240,346,380,415,440			DC(V): 12,24 AC(V): 12,24,110,120,220 240,346,380,415,440			DC(V): 12,24 AC(V): 12,24,110,120 220,240,346,380,415 ,440
SEC. 0-6 (S)x0-6 (S) 0-6 (S)x0-60(S) 0-60(S)x0-6 (S) 0-60(S)x0-60(S)			SEC. 0-1 (S) 0-3 (S) 0-6 (S) 0-12(S) 0-30(S) 0-60(S)	MIN. 0-3 (m) 0-6 (m) 0-12(m) 0-30(m) 0-60(m)	HR. 0-3 (H) 0-6 (H) 0-12(H) 0-24(H)	SEC. 0-3 (S)
± 1% MAX			± 1% MAX			± 1% MAX
± 20% MAX			± 10% MAX			± 10% MAX
± 1% MAX			± 1% MAX			± 1% MAX
± 2% MAX			± 2% MAX			± 2% MAX
0.1 SEC MAX			0.1 SEC MAX			0.1 SEC MAX
5x10 ⁶ TIMES			5x10 ⁶ TIMES			5x10 ⁶ TIMES
2x10 ⁵ TIMES			2x10 ⁵ TIMES			2x10 ⁵ TIMES
2VA			3VA			2VA
230g			230g			160g

MULTI-RANGE TIMER	STAR-DELTA TIMER	DIGITAL COUNTER	
	FOR INDUCTION MOTOR START	HIGH PRECISION TWO DIGITS SETTING & DISPLAY	HIGH PRECISION THREE DIGITS SETTING & DISPLAY
TM48S- TM48S-AB	TSDT-N	TH2C- ⁿ _y	TH3C- ⁿ _y
250V 5A	250V 3A	250V 3A	250V 3A
250V 5A			
250V 5A	250V 1A		
			
Dimensions 48H x 48W x 80D	SURFACE (N)	SURFACE (N)	SURFACE (N)
24V ~ 240V AC/DC	AC(V):110, 120, 220, 240, 380, 415, 440		
1. 1S, 10S, 1M, 10M 2. 3S, 30S, 3M, 30M 3. 6S, 60S, 6M, 60M 4. 3M, 30M, 3H, 30H	SEC. 0-12(S) 0-30(S) 0-60(S) CHARGE TIME : 0.1- 0.7(S) STANDARD:0.1(S)		
		FLUSH (Y)	FLUSH (Y)
±1% MAX	±1% MAX	DC(V) : 12, 24 AC(V) : 12, 24, 110, 120, 220, 240, 380, 415, 440	
±10% MAX	±10% MAX		
±1% MAX	±1% MAX	INPUT SIGNAL : 30CPS MAX RESET SYSTEM : POWER-OFF RESET	
±2% MAX	±2% MAX		
0.1 SEC MAX	0.1 SEC MAX		
10 ⁶ TIMES	5x10 ⁶ TIMES		
10 ⁵ TIMES	2x10 ⁶ TIMES		
2VA	3VA	3VA	3VA
180g	250g	220g	230g

CLASSIFICATION		DIGITAL TIMER			DIGITAL TIMER		
FEATURES		HIGH PRECISION THREE DIGITS SETTING & DISPLAY			HIGH PRECISION TWO DIGITS SETTING & DISPLAY		
OUTPUT CAPACITY	MODEL	TH3D-N _A	TH3D-N _B	TH3D-N _C	TH2D-N _A	TH2D-N _B	TH2D-N _C
	1C DELAY	250V 3A		250V 3A	250V 3A		250V 3A
	2C DELAY		250V 3A			250V 3A	
	1A INSTANT	250V 1A			250V 1A		
APPEARANCE							
MOUNTING		SURFACE (N)		FLUSH (Y)	SURFACE (N)		FLUSH (Y)
VOLTAGE		DC(V): 12,24 AC(V): 12,24,110,120,220 240,346,380,415,440			DC(V): 12,24 AC(V): 12,24,110,120,220 240,346,380,415,440		
TIMING RANGE		SEC. 0-0.999(S) 0-9.99 (S) 0-99.9 (S) 0-999 (S)			SEC. 0-9.9(S) 0-99 (S)		
ACCURACY	REPETITION ERROR	± 0.05SEC MAX			± 0.05SEC MAX		
	SETTING ERROR	0			0		
	EFFECT OF VOLTAGE	± 0.05SEC MAX			± 0.05SEC MAX		
	EFFECT OF TEMP	± 0.05SEC MAX			± 0.05SEC MAX		
	RESETTING TIME	0.1 SEC MAX			0.1 SEC MAX		
LIFE	MECHANICAL	5x10 ⁶ TIMES			5x10 ⁶ TIMES		
	ELECTRICAL	2x10 ⁵ TIMES			2x10 ⁵ TIMES		
POWER CONSUMPTION		3VA			3VA		
WEIGHT		230g			220g		

96 × 96mm
72 × 72mm

SCALE PLATE REPLACEABLE



Dimensions



PANEL COUT-OUT



A-72



A-96



V-72



V-96

MEASURING RANGE:

Moving Coil Type

DC uA	DC mA	DC A	DC V
100	1	1	1
150	1.5	1.5	1.5
200	2.5	2.5	2.5
250	4	4	4
300	6	6	6
400	10	10	10
500	15	15	15
600	20	20	20
	25	25	25
	30	30	30
	40	60	40
	60	60	60
			100
			150
			250
			300
			400
			600

Moving Iron Type

AC mA	AC A	AC V
400	1	6
600	1.5	10
	2.5	15
	4	25
	10	40
	15	60
	20	100
	25	150
	40	250
	60	300
	100	400
		600

ACCURACY:

Class 1.5

TEST VOLTAGE:

2KV 60-60c/s.

AC AMPERE OVRLOAD

200%, 300%, 500%

SCALE:

Glass Window ABS Resin frame and case, Bakelit base.

COMPOSITION:

Black base and fram, white scale plate and meter body.

COLOUR:

POINTER:

Stick shape in black colour.

SCALE LENGTH::

A-96: 85mm, 3.35"

A-72: 62mm, 2.44"

DC Ammeters Above 50A require a basic 50mV meter combined with an external shunt.

AC Ammeters Above 100A require a basic 5A meter combined with an external CT.

AC Ammeters Above 600Volts require a basic 150V meter combined with an external PT.



HZ-72, HZ-96

ACCURACY: class 1.5%
WORKING POSITION: Vertical.
RATED VOLTAGE: 110V,220V,380V,550V,(HZ-96)
LIMIT OF VOLTAGE FLUCTUATION: $\pm 20\%$
CONSUMPTION: Max. 15mA
SCALE LENGTH: 85mm, 3.35"
TEST VOLTAGE: 2kV,50 c/s.
MEASURING RANGE: 45-65 c/s.
COMPOSITION: Glass window, ABS Resin frame and case, bake-life base Mounting fittings included.
COLOUR: Black base and frame, white scale plate and meter body.
POINTER: Stick shape in black colour.



KW-96

MEASURING RANGE: 110V,220V,380V,550V, 1A,5A.
ACCURACY: class 1.5%
FREQUENCY RANGE: 45-65, c/s.
SCALE LENGTH: 88mm, 3.47"
COMPOSITION: Glass window, ABS Resin frame and case, bake-life base Mounting fittings included.
COLOUR: Black base and frame, white scale plate and meter body.
POINTER: Stick shape in black colour.
TRANSDUCER: Internal.



PF-96

MEASURING RANGE: 110V,220V,380V,550V, 1A,5A.
ACCURACY: Four degrees in phase range.
FREQUENCY: 45-65, c/s.
TEST VOLTAGE: 2kV,50-60 c/s.
SCALE LENGTH: 88mm, 3.47"
COMPOSITION: Glass window, ABS Resin frame and case, bake-life base Mounting fittings included.
COLOUR: Black base and frame, white scale plate and meter body.
POINTER: Stick shape in black colour.



HZ-72, HZ-96

ACCURACY: class 1.5%
WORKING POSITION: Vertical.
RATED VOLTAGE: 110V,220V,380V,550V.
LIMIT OF VOLTAGE FLUCTUATION: $\pm 20\%$
CONSUMPTION: Max. 15mA
TEST VOLTAGE: 2kV,50 c/s.
MEASURING RANGE: 45-65 c/s.
COMPOSITION: Glass window, ABS Resin frame and case,PC glass fiber base Mounting fittings included.
COLOUR: Black base and frame, white scale plate and meter body.



L-96

ACCURACY: class 1.5%
MEASURING RANGE: **TEST VOLTAGE:** 2kV,50-60 c/s.

moving coil type:mo	moving iron type:
DC 100 μ A ~ DC 600 μ A	AC 400mA ~ AC600mA
DC 1mA ~ DC 60mA	AC 1A ~ AC100A
DC1A ~ DC 60A	AC 6V ~ AC 600V

LS-110PT
110V/5A 220V/5A 3W3φ
380V/5A 3W4φ



LS-110 3W 3φ KW
110V, 220V, 380V
CT : 5A & 3W4φ



LS-110 AC, 600V
AC, 500V
AC, 300V



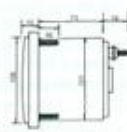
LS-110 AMPERS
CT : 5A



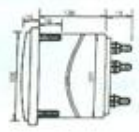
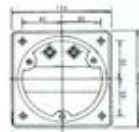
LS-110 HZ
45-55HZ
55-65HZ/110V, 220V, 380V



Panel CUT-OUT



General Dimension



Dimension For LS-110 KW

MEASURING RANGE:

LS-110 A/V:

Moving Coil Type

DC uA	DC mA	DC A	DC V
500	1	1	30
	2	1.5	50
	5	2	100
	10	3	150
	20	5	300
	50	10	
	100	15	
	200	20	
	500	30	

- * For ranges higher than 30A DC, use external shunt with a 50mV DC ammeter.
- * For ranges higher than 300V DC, use external Multiplier with a 1mA Voltmeter.
- * For ranges higher than 5A AC, use external Current Transformer with a 50A AC Ammeter.
- * For ranges higher than 600V AC, use external Potential Transformer with a 150V AC Voltmeter.

LS-110 KW: 110V, 220V, 380V, 500V.
1A, 5A.

Moving Iron Type

AC A	AC V
1	150
5	300
	500
	600

LS-110 CO φ:

LS-110 Hz:

ACCURACY:

FULL SCALE

DEFLECTION:

FULL SCALE

LENGTH:

CASE AND

COMPOSITION:

COLOUR:

POINTER:

*For any rating other than listed above, USE external Current Transformer and/or external Potential Transformer with a 110V/5A instrument.

110V, 220V, 380V, 500V.
1A, 5A.

*For any rating other than those listed above, use external Potential Transformer with a 110V/5A instrument.

110V, 220V, 380V, 500V.

*For a voltage rating higher than above, use an external Potential Transformer with a 110V instrument.

LS-110 A/V - Class 1.5

LS-110 KW - Class 1.5

LS-110 COS φ - 4° in phase angle.

LS-110 Hz-Class 1.5

250°

183mm, 7 1/4"

Acrylic Resin cover, plastic meter body, bakelite terminal plate.

Four stud mounting.

White scale plate, black terminal plate, grey meter body.

Sword type in black colour.

LS-80



LS-80



ACCURACY: LS - 80 A / v — Class 1.5
LS - 80 Hz — Class 1.5
LS - Hz: 110V, 220V, 380V, 500V.
*For a voltage rating higher than above, use external Potential Transformer with a 110V instrument.

FULL SCALE DEFLECTION: 250°

CASE AND COMPOSITION:

Acrylic Resin cover, plastic Meter body, bakelite terminal plate. Four stud mounting.

MEASURING RANGE:

LS-80 A/V:

Moving Coil Type

DC mA	DC A	DC V
1	1	30
2	1.5	50
5	2	100
10	3	150
20	5	300
50	10	
100	15	
200	20	
500	30	

Rectifier Type:

AC A	AC V
1	150
5	300
	500
	600

* For ranges higher than 30A DC, use external shunt with a 50mV DC ammeter.

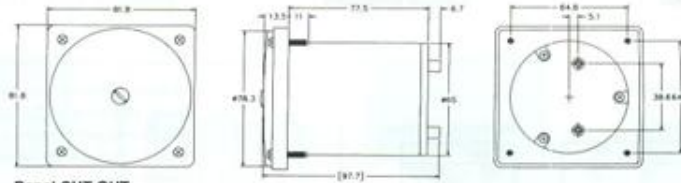
* For ranges higher than 300V DC, use external Multiplier with a 1mA Voltmeter.

* For ranges higher than 5A AC, use external Current Transformer with a 50A AC Ammeter.

* For ranges higher than 600V AC, use external Potential Transformer with a 150V AC Voltmeter.

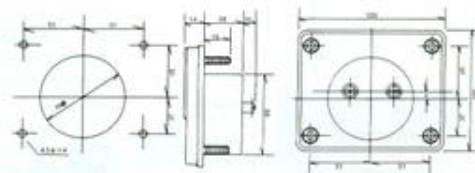
COLOUR: White scale plate, black terminal plate, grey meter body.

POINTER: Sword type in black colour.



Panel CUT-OUT

120S



Panel CUT-OUT

Measuring Range:

Moving Coil Type:

50μA—50A DC

3V—1000V DC

Accuracy: Class 1.5% 2.5%

Moving Iron Type:

50mA—50A AC

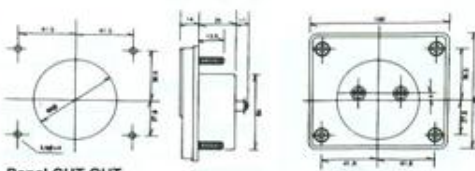
150V—500V AC

Rectifier Type:

3V—500V AC

Accuracy: Class 2.5%

100S



Panel CUT-OUT

Measuring Range:

Moving Coil Type:

50μA—50A DC

3V—1000V DC

Accuracy: Class 1.5% 2.5%

Moving Iron Type:

50mA—50A AC

150V—500V AC

Rectifier Type:

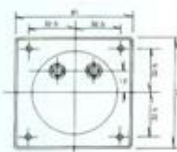
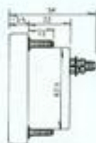
3V—500V AC

Accuracy: Class 2.5%

A-80, V-80

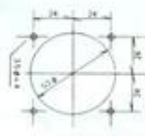


Panel CUT-OUT

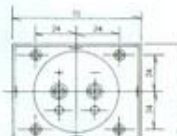
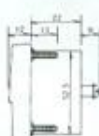


Measuring Range:
Moving Coil Type:
50 μ A—50A DC
3V—1000V DC
Accuracy: Class 1.5% 2.5%
Moving Iron Type:
50mA—50A AC
150V—500V AC
Rectifier Type:
3V—500V AC
Accuracy: Class 2.5%

A-670, V-670

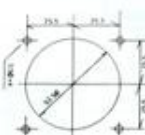


Panel CUT-OUT



Measuring Range:
Moving Coil Type:
50 μ A—50A DC
3V—1000V DC
Accuracy: Class 1.5% 2.5%
Moving Iron Type:
50mA—50A AC
150V—500V AC
Rectifier Type:
3V—500V AC
Accuracy: Class 2.5%

A-65, V-65

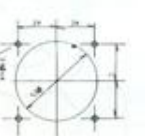


Panel CUT-OUT



Measuring Range:
Moving Coil Type:
50μA—50A DC
3V—1000V DC
Accuracy Class 1.5% 2.5%
Moving Iron Type:
50mA—50A AC
150V—500V AC
Rectifier Type:
3V—500V AC
Accuracy Class 2.5%

A-60, V-60



Panel CUT-OUT

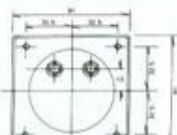


Measuring Range:
Moving Coil Type:
50μA—50A DC
3V—1000V DC
Accuracy Class 1.5% 2.5%
Moving Iron Type:
50mA—50A AC
150V—500V AC
Rectifier Type:
3V—500V AC
Accuracy Class 2.5%

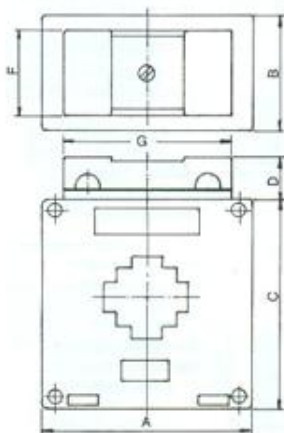
B-80



Panel CUT-OUT



Measuring Range:
Moving Coil Type:
50μA—50A DC
3V—1000V DC
Accuracy: Class 1.5% 2.5%
Moving Iron Type:
50mA—50A AC
150V—500V AC
Rectifier Type:
3V—500V AC
Accuracy: Class 2.5%



Dimension unit: mm

MODEL	A	B	C	D	E	F
MFO-30 CT	75	43	82	17	60	31
MFO-40 CT	75	43	82	17	60	31
MFO-60 CT	101	45	110	17	60	31
MFO-100 CT	145	45	139	17	60	31

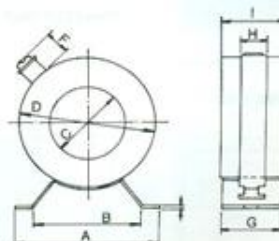
ABS plastic case, to tally enclosed, built in cover, and several ampere outputs at secondary side.

★ Iron plate for fixing metal housing - 2 pieces - 1.

★ Iron bar and screw for fixing copper bus - 3 pieces.

★ White or unicolor paper board box for packing.

MODEL	RATED CURRENT(A) PRIMARY/SECONDARY	WINDOW DIMENSION	RATY PCOAD (VA)	ACCURACY CLASS	RATED VOLTAGE
MFO-30 CT	30/5A—500/5A	30 X10mm	2.5	1.0	600V
MFO-40 CT	30/5A—500/5A	40 X10mm	5	1.0	600V
MFO-60 CT	400/5A—800/5A	60 X20mm	10	1.0	600V
MFO-100 CT	800/5A—3000/5A	100 X10mm	15	1.0	600V



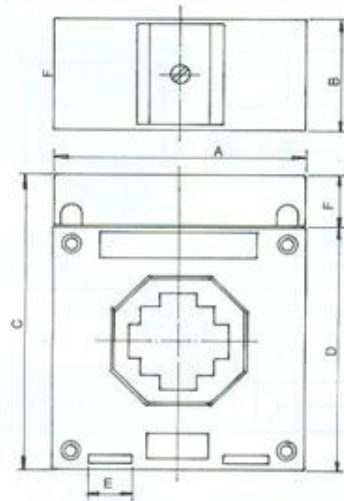
Dimension unit: mm

MODEL	RATED CURRENT Rating (Amp)	SEC (A) Current	RATY (AV)	ACCURACY	RATED Strength
CO-25 CT	10/5A—300/5A	5	2	3.0	40
CO-32 CT	10/5A—400/5A	5	15	1.0	40
CO-58 CT	400/5A—600/5A	5	15	1.0	40
CO-90 CT	800/5A—1200/5A	5	15	1.0	40
CO-110 CT	1000/5A—2500/5A	5	15	1.0	40
CO-130 CT	2000/5A—9500/5A	5	15	1.0	40

MODEL	A	B	C	D	E	F	G	H	I
CO-25 CT	75	55	32	65	1.2	11	28	13	30
CO-32 CT	90	44	35	78	2	13	45	25	53.5
CO-58 CT	103	44	60	102	2	13	45	25	54.5
CO-90 CT	103	60	90	135	2	13	45	25	55.5
CO-110 CT	103	60	110	151	2	13	45	25	55.5
CO-130 CT	103	60	128	183	2	13	45	25	60

P.P. Case

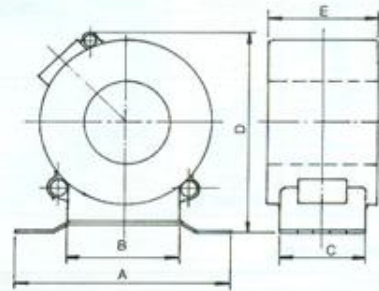
White or unicolor paper board box for 1- Piece packing (In struction manual is attached).



Dimensions unit: mm

MODEL	A	B	C	D	E	F
AT - 11 CT	77	39	95	78	10	16
AT - 13 CT	106	39	124	107	10	16
AT - 15 CT	56	29	63		10	

PRIMARY DIMENSIONS		TRANSFORMATION RATION	RATED OUTPUT (VA)		
BARRE(mm)	CABLE(mm)		CLASS 0.5	CLASS 1.0	CLASS 3.0
30 X10 max	φ23 max	100/5A—600/5A	2.5—15	3.8—30	5—45
		50/5A—600/5A	2.5—15	1—20	2.5—30
50 X20 max	φ44 max	300/5A—2000/5A	5—30	10—60	15—90



MODEL	RATED CURRENT(A) Primary/Secondary	HOLE Diameter	RATED Power	RATED Voltage	OVERCUR RATED Strength
CH - 29 CT	10/5A—500/5A	29mm	10VA	600V	40
CH - 39 CT	20/5A—1000/5A	39mm	10VA	600V	40
CH - 60 CT	400/5A—1000/5A	60mm	10VA	600V	40
CH - 85 CT	600/5A—1000/5A	85mm	10VA	600V	40
CH - 105 CT	800/5A—5000/5A	105mm	10VA	600V	40

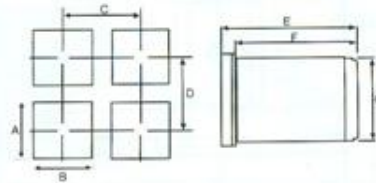
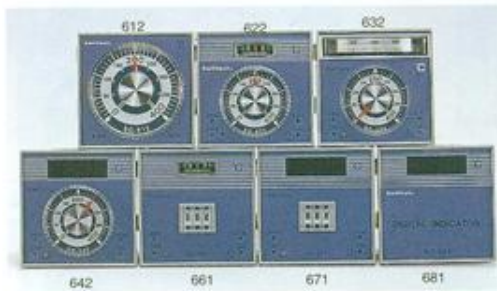
Dimension unit: mm

MODEL	A	B	C	D	E	F
CH-29 CT	98	52	25	85	53	22
CH-39 CT	98	52	42	100	53	
CH-60 CT	123	70	25	120	55	20
CH-85 CT	143	90	42	143	55	
CH-105 CT	1143	98	25	157	55	18

P.P. Case

Totally enclosed, white or unicolor paper

Board box for packing (Instruction manual is attached)



SIZE	A	B	C	D	E	F	G
96mm x 96mm	90 +1 -0	90 +1 -0	110 or more	110 or more	120	105	89
72mm x 72mm	68 +1 -0	68 +1 -0	82 or more	82 or more	110	100	68
96mm x 48mm	90 +1 -0	43 +1 -0	110 or more	70 or more	132	117	90
48mm x 48mm	43 +1 -0	43 +1 -0	70 or more	70 or more	97	80	50

Features:

- ★ Economical. Easy to use.
- ★ Input types: J, K, R, S thermocouples and 100 ohm platinum RTD.
- ★ With display of sensor break (Exclusive of Model SG-612).
- ★ User convertible for Proportional On-Off control.
- ★ Long durability.

Specifications:

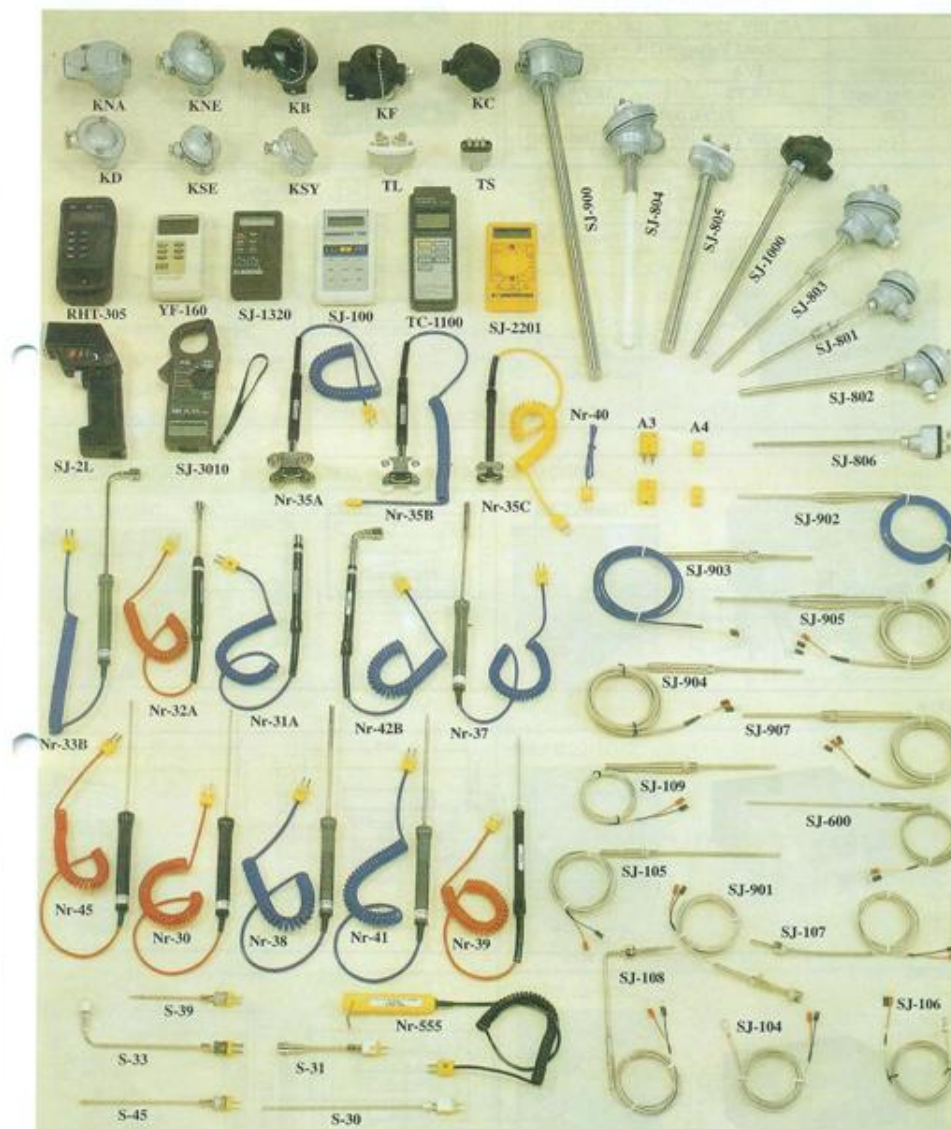
96 x 96mm	SG-612	SG-622	SG-632	SG-642	SG-661	SG-671	SG-681
72 x 72mm	SG-714	SG-724		SG-742	SG-761	SG-771	
96 x 48mm					SG-861	SG-871	SG-881
48 x 48mm	SG-414					SG-471	
Input	K,J,PT100	K,J,PT100	K,J,PT100	K,J,PT100	K,J,PT100	K,J,PT100	K,J,PT100
	0-100°C	0-100°C	0-100°C	0-100°C	0-100°C	0-100°C	0-100°C
	0-200°C	0-200°C	0-200°C	0-200°C	0-200°C	0-200°C	0-200°C
	0-400°C	0-400°C	0-400°C	0-400°C	0-400°C	0-400°C	0-400°C
	0-800°C	0-800°C	0-600°C	0-600°C	0-600°C	0-800°C	0-800°C
	0-1200°C	0-1200°C	0-1200°C	0-1200°C	0-1200°C	0-1200°C	0-1200°C

Technical data

Power Input	120/240Vac, 50/60Hz
Control	ON/OFF, Proportional
Output	Relay(250V 5A), SSR(24Vdc), 4-20mA, 0-20mA, 1-5Vdc, 0-5Vdc
Proportional Band	2.5% Full scale
Cycle Time	Relay(Approx. 10sec.), SSR (Approx. 3 Sec.)
Accuracy	1% Full Scale
Ambient Temp	20M ohm, 500Vdc
Hi/Low Alarm	10% Full Scale(Adjustable)
Input	K(CA), J(C), PT100 Q (DIN), R(PRI3%)
Power Consumption	Relay(5w) SSR(5w)
Insulation	20M ohm, 500Vdc

NOTES:

- Relay - output can suitable with control mode ON/OFF, P.
 S.S.R. - output can suitable with control mode P.
 4 - 20mA - output only can suitable with P control.
 All the alarm function are deviation are deviation (Hi/Low) alarm.



ELECTRO-MAGNETIC COUNTER



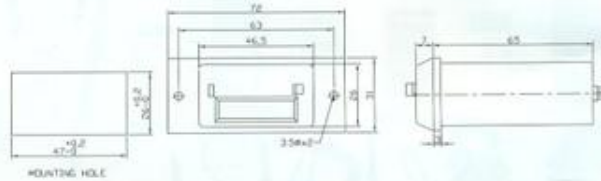
Models	LFC-5, LFC-5S, LFC-6, LFC-6S	
Specs.		
Voltage	AC110V, 220V	DC-12V, 24V
Tolerance	Rated Voltage $\pm 15\%$ - $\pm 10\%$	
Consumption	3VA	3.5W
Counting Speed	10CPS	20CPS
Life	20,000,000 Times	
Test	AC-1,500V (50/60Hz) 1 minute (Dielectric)	

FC-5P-RS

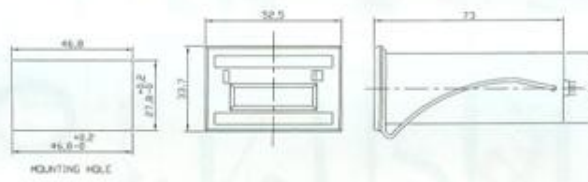
Machine counter Digit: 5
Max. speed: 800times/Minute Wt. 68g



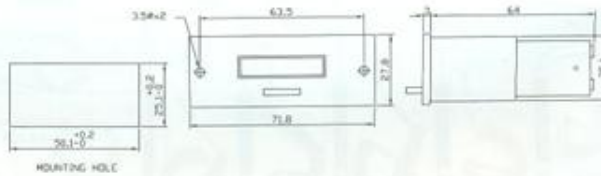
FC-5



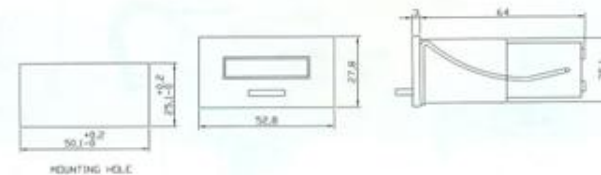
FC-5S



FC-6



FC-6S



TOWER LIGHT

SPECIFICATION

ATL S 5 — L 2 3 ROG

1 2 3 4 5 6 7

Item	Symbol	Types
1. Fixing type	ATL ARP APW	Steel rod Round fixing plate Mounting plate
2. Function	S F B FB	Standard type Flash type Buzzer Flash w/Buzzer
3. Diameter	5 6	50 mm ϕ 60 mm ϕ
4. Bulb type	I L	Incandescent LED
5. Voltage	1 2 12 24	110 VAC 220 VAC 12 VAC/DC 24 VAC/DC
6. Stage	1-5	
7. Color	R O G B W	Red Orange Green Blue White

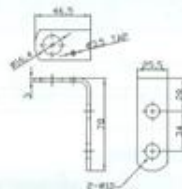
FEATURES

1. The LED bulbs and incandescent bulbs (BA15 base) are changeable.
2. LED Colors are available in red, orange, green, blue, white.
3. Lens can be arranged in any combinations desired.
4. Tower light with audible alarm is also available.

LAMP SPECIFICATION (FOR REFERENCES ONLY)

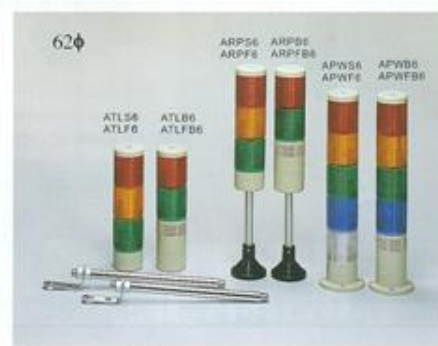
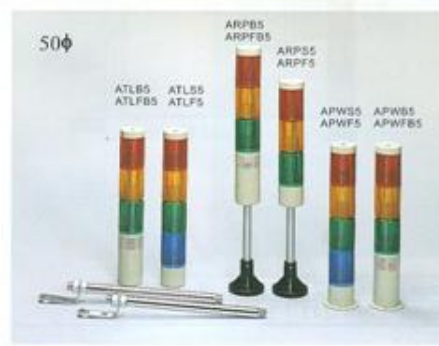
Type of bulb: BA15S base, incandescent 8W 110VAC 0.06A 220VAC 0.03A 12V AC/DC 0.7A 24VAC/DC 0.35A
Type of bulb: BA15S base, LED lamp Color: Red, Orange, Green, Blue, White 110V AC 0.02A 220V AC 0.02A 12V AC/DC 0.1A 24V AC/DC 0.03A
Buzzer: 90dB at 30cm/24VDC Current: 30mA

MB-16 Metal fixing bracket



RP-16 Round fixing plate

Aluminum rod 16mm ϕ



TOWER LIGHT 50mm $\varnothing$

APWS5, 50mm $\varnothing$

APWF5, 50mm $\varnothing$



Stage	1	2	3	4	5
Height	118	182	246	310	375

ARPS5, 50mm $\varnothing$

ARPF5, 50mm $\varnothing$



Stage	1	2	3	4	5
Height	115	179	243	307	371

ATLS5, 50mm $\varnothing$

ATLF5, 50mm $\varnothing$



Stage	1	2	3	4	5
Height	115	179	243	307	371

APWB5, 50mm $\varnothing$

APWFB5, 50mm $\varnothing$



Stage	1	2	3	4	5
Height	182	246	310	374	438

ATLB5, 50mm $\varnothing$

ATLFB5, 50mm $\varnothing$



Stage	1	2	3	4	5
Height	179	243	307	371	435

ARPB5, 50mm $\varnothing$

ARPF5, 50mm $\varnothing$



Stage	1	2	3	4	5
Height	179	243	307	371	435

TOWER LIGHT 62mm ϕ

APWS6, 62mm ϕ

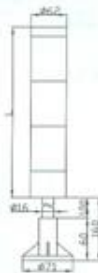
APWF6, 62mm ϕ



Stage	1	2	3	4	5
Height	118	182	246	310	374

ARPS6, 62mm ϕ

ARPF6, 62mm ϕ



Stage	1	2	3	4	5
Height	115	179	243	307	371

ATLS6, 62mm ϕ

ATLF6, 62mm ϕ



Stage	1	2	3	4	5
Height	115	179	243	307	371

APWB6, 62mm ϕ

APWFB6, 62mm ϕ



Stage	1	2	3	4	5
Height	182	246	310	374	438

ATLB6, 62mm ϕ

ATLFB6, 62mm ϕ



Stage	1	2	3	4	5
Height	179	243	307	371	435

ARPB6, 62mm ϕ

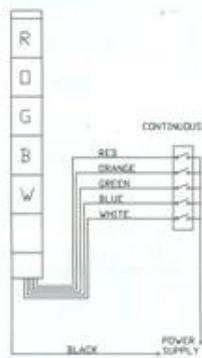
ARPF6, 62mm ϕ



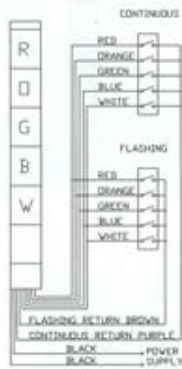
Stage	1	2	3	4	5
Height	179	243	307	371	435

TOWER LIGHT
Wiring diagram

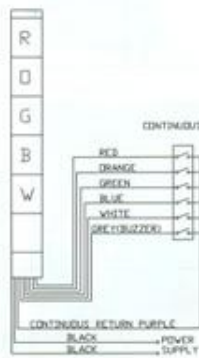
Standard type



Flash type



Buzzer type



Flash & buzzer type

